NSW (Off-Airport) Soil and Water Management Sub-Plan

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works

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Document approval

Rev	Date	Prepared by	Reviewed by	Approved by	Remarks
A	19/05/2022	S. Anstee	M. Billings	M Billings	For stakeholder Consultation
0	9/08/2022	D. Corish	E. Kline	E. Kline	Response to stakeholder comments, Sydney Metro comments and ER comments
1	21/09/2022	D. Corish	E. Kline	E. Kline	Response to ER comments
Signature:				EKline	

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Compliance

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<tr><th>No.</th><th>Requirement</th><th>Reference</th></tr>
<tr><td colspan="3">SSI 10051 Planning Approval</td></tr>
<tr><td>A10</td><td>The CSSI may be constructed and operated in stages. Where staged construction and/or operation is proposed, a Staging Report must be prepared. The Staging Report must be submitted to the Planning Secretary for information no later than one (1) month before the lodgement of any CEMP or CEMP sub plan for the first of the proposed stages of construction (or if only staged operation is proposed, one (1) month before the commencement of operation of the first of the proposed stages of operation), unless otherwise agreed with the Planning Secretary.</td><td>Section 2.3</td></tr>
<tr><td>C5 (c)</td><td>Of the CEMP Sub-plans required under Condition C1, the following CEMP Sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP Subplan. Details of issues raised by a government agency during consultation (as required by Condition A6) must be provided with the relevant CEMP Sub-plan when submitted to the Planning Secretary / ER (whichever is applicable). Where a government agency(ies) request(s) is not included, the Proponent must provide the Planning Secretary / ER (whichever is applicable) justification as to why.
<table>
<tr><th></th><th>Required CEMP Sub-plan</th><th>Relevant government agencies to be consulted for each CEMP Sub-plan</th></tr>
<tr><td>(a)</td><td>Noise and vibration</td><td>Relevant Councils and WaterNSW (in relation to its assets)</td></tr>
<tr><td>(b)</td><td>Flora and fauna</td><td>DPIE EES, DPI Fisheries, and Relevant Councils</td></tr>
<tr><td>(c)</td><td>Soil and Water</td><td>DPI Fisheries, and Relevant Councils</td></tr>
<tr><td>(d)</td><td>Non-Aboriginal heritage</td><td>Relevant Councils, WaterNSW and Heritage NSW</td></tr>
</table></td><td>Section 1.4</td></tr>
<tr><td>C6</td><td>The CEMP Sub-plans must state how:
(a) the environmental performance outcomes identified in the documents listed in Condition A1 will be achieved;
(b) the mitigation measures identified in the documents listed in Condition A1 will be implemented;
(c) the relevant terms of this approval will be complied with; and
(d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed through SMART principles.</td><td>Section 1.3
Section 7
This Table
Element 4</td></tr>
<tr><td>C7</td><td>With the exception of any CEMP Sub-plans expressly nominated by the Planning Secretary to be endorsed by the ER, all CEMP Sub-plans must be submitted to the Planning Secretary for approval.</td><td>Section 1.4</td></tr>
<tr><td>C8</td><td>The CEMP Sub-plans not requiring the Planning Secretary's approval must obtain the endorsement of the ER as being in accordance with the conditions of approval and all relevant undertakings made in the documents listed in Condition A1. Any of these CEMP Sub-plans must be submitted to the ER with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before construction or where construction is staged no later than one (1) month before the commencement of that stage.</td><td>Section 1.4</td></tr>
<tr><td>C9</td><td>Any of the CEMP Sub-plans to be approved by the Planning Secretary must be submitted to the Planning Secretary with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before construction or where construction is staged no later than one (1) month before the commencement of that stage.</td><td>Section 1.4</td></tr>
<tr><td>C12</td><td>In addition to the relevant requirements of the CEMF, the Soil and Water CEMP Sub-Plan must include but not be limited to:
(a) details how the requirements of Conditions E127, E128 and E129 will be met; and
(b) the unexpected, contaminated finds protocol required by Condition E98.</td><td>Element 4
Annexure C</td></tr>
</table>

<table>
<tr><th>No.</th><th>Requirement</th><th>Reference</th></tr>
<tr><td>C13 (b), (c)</td><td>The following Construction Monitoring Programs must be prepared in consultation with the relevant government agencies (as required by Condition A6) identified for each to compare actual performance of construction of the CSSI against the performance predicted in the documents listed in Condition A1 or in the CEMP. Where a government agency(ies) request(s) is not included, the Proponent must provide the Planning Secretary / ER (whichever is applicable) justification as to why.
<table><tr><th></th><th>Required Construction Monitoring Programs</th><th>Relevant government agencies to be consulted for each Construction Monitoring Program</th></tr><tr><td>(a)</td><td>Noise and vibration</td><td>Relevant Councils and WaterNSW (in relation to its assets)</td></tr><tr><td>(b)</td><td>Surface water quality</td><td>DPIE Water, DPI Fisheries, and Relevant Councils</td></tr><tr><td>(c)</td><td>Groundwater</td><td>DPIE Water</td></tr><tr><td>(d)</td><td>Air Quality</td><td>Relevant Councils</td></tr></table></td><td>Section 6
Annexure A
Annexure B</td></tr>
<tr><td>C14</td><td>Each Construction Monitoring Program must provide:
(a) details of baseline data available including the period of baseline monitoring;
(b) details of baseline data to be obtained and when;
(c) details of all monitoring of the project to be undertaken;
(d) the parameters of the project to be monitored;
(e) the frequency of monitoring to be undertaken;
(f) the location of monitoring;
(g) the reporting of monitoring results and analysis results against relevant criteria;
(h) details of the methods that will be used to analyse the monitoring data;
(i) procedures to identify and implement additional mitigation measures where the results of the monitoring indicated unacceptable project impacts;
(j) a consideration of SMART principles;
(k) any consultation to be undertaken in relation to the monitoring programs; and
(l) any specific requirements as required by Conditions C15 to C16.</td><td>Annexure A
Annexure B</td></tr>
<tr><td>C16</td><td>Groundwater Construction Monitoring Program must include:
(a) groundwater monitoring networks at each construction excavation site predicted to intercept groundwater in the documents listed in Condition A1;
(b) detail of the location of all monitoring bores with nested sites to monitor both shallow and deep groundwater levels and quality;
(c) define the location of saltwater interception monitoring where sentinel groundwater monitoring bores will be installed between the saline sources and that of each construction excavation site predicted to intercept groundwater in the documents listed in Condition A1;
(d) results from existing monitoring bores;
(e) monitoring and gauging of groundwater inflow to the excavations predicted to intercept groundwater in the documents listed in Condition A1, appropriate trigger action response plan for all predicted groundwater impacts upon each noted neighboring groundwater system component for each excavation construction site;
(f) trigger levels for groundwater quality, salinity and groundwater drawdown in monitoring bores and / or other groundwater users;
(g) daily measurement of the amount of water discharged from the water treatment plants;
(h) water quality testing of the water discharged from treatment plants;
(i) management and mitigation measures and criteria, including measures to address impacts on groundwater dependent ecosystems;
(j) groundwater inflow to the excavations to enable a full accounting of the groundwater take from the Sydney Basin Central Groundwater Source;
(k) reporting of groundwater gauging at excavations, groundwater monitoring, groundwater trigger events and action responses; and
(l) methods for providing the data collected to Sydney Water where discharges are directed to their assets.</td><td>Annexure A</td></tr>
<tr><td>C17</td><td>With the exception of any Construction Monitoring Programs expressly nominated by the Planning Secretary to be endorsed by the ER, all Construction Monitoring Programs must be submitted to the Planning Secretary for approval.</td><td>Section 1.4</td></tr>
</table>

No.	Requirement	Reference
C18	The Construction Monitoring Programs not requiring the Planning Secretary's approval must obtain the endorsement of the ER as being in accordance with the conditions of approval and all undertakings made in the documents listed in Condition A1. Any of these Construction Monitoring Programs must be submitted to the ER for endorsement at least one (1) month before the commencement of construction or where construction is staged no later than one (1) month before the commencement of that stage.	Section 1.4
C19	Any of the Construction Monitoring Programs which require Planning Secretary approval must be endorsed by the ER and then submitted to the Planning Secretary for approval at least one (1) month before the commencement of construction or where construction is staged no later than one (1) month before the commencement of that stage.	Section 1.4
C20	Unless otherwise agreed with the Planning Secretary, construction must not commence until the Planning Secretary has approved, or the ER has endorsed (whichever is applicable), all of the required Construction Monitoring Programs and all relevant baseline data for the specific construction activity has been collected.	Section 1.4
C21	The Construction Monitoring Programs, as approved by the Planning Secretary or the ER has endorsed (whichever is applicable), including any minor amendments approved by the ER, must be implemented for the duration of construction and for any longer period set out in the monitoring program or specified by the Planning Secretary or the ER (whichever is applicable), whichever is the greater.	Section 1.4
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. *Note: Where a relevant CEMP Sub-plan exists, the relevant Construction Monitoring Program may be incorporated into that CEMP Sub-plan.*	Annexure A Annexure B
Construction Environmental Management Framework		
3.5 (a)	Subject to Section 3.4(b) the Principal Contractors will prepare issue-specific environmental sub plans to the CEMP which address each of the relevant environmental impacts at a particular site or stage of the project. Issue specific sub plans will include as a minimum… Viii. Soil and water management… Some of these sub plans may also be informed by other environmental management documents included in the planning approval, for example the Construction Traffic Management Framework or Construction Noise and Vibration Standard.	This Plan
7.1(a)	The following groundwater management objectives will apply to construction: i. Reduce the potential for drawdown of surrounding groundwater resources; ii. Prevent the pollution of groundwater through appropriate controls; and iii. Reduce the potential impacts of groundwater dependent ecosystems. iv. For on-airport works, the Sydney Metro Western Sydney Airport Soil and Water CEMP will detail all the groundwater management objectives and will be consistent with the WSA Soil and Water CEMP, including all appendices to the CEMP.	Section 1.3 Annexure A
7.2(b)	For off-airport works, the following content may be provided within other sub plans such as the Soil and Water Management Plan and Flora and Fauna Management Plan. Groundwater management of on-airport works will be implemented through the groundwater management plan approved as part of the SMWSA Soil and Water CEMP. In particular the groundwater quality criteria will be in accordance to the WSA Soil and Groundwater CEMP Appendix G.	The Groundwater Management Plan requirements are addressed in this Sub-Plan
7.2(b)i	Principal Contractors will develop and implement a Groundwater Management Plan for off-airport works. The Groundwater Management Plan will include as a minimum: i. The groundwater mitigation measures as detailed in the planning approval documentation	This Sub-Plan Section 7.2 Annexure A
7.2(b)ii	The requirements of any applicable licence conditions	Section 3.3

No.	Requirement	Reference
7.2(b)iii	Details of proposed extraction, use and disposal of groundwater, and measures to mitigate potential impacts to groundwater sources, incorporating monitoring, impact trigger definition and response actions for all groundwater sources potentially impacted by SMWSA.	Section 7.2 Annexure A (Section 4 and Section 7.12)
7.2(b)iv	Evidence of consultation with the relevant government agencies, such as DPIE for off-airport works or land.	Section 1.4 Annexure D
7.2(b)v	The responsibilities of key project personnel with respect to the implementation of the plan.	Section 8
7.2(b)vi	Procedures for the treatment, testing and discharge of groundwater from the site.	Section 7.5 Annexure A (Section 7.5 to 7.12)
7.2(b)vii	Compliance record generation and management.	Section 9.5 Annexure A (Section 8.5.2)
7.2(b)viii	Details of groundwater monitoring if required.	Annexure A
7.3(a)	The on-airport Soil and Water CEMP (with the groundwater management plan) and the off-airport Groundwater Management Plan will include the following groundwater mitigation measures as well as relevant Conditions: i. Implementing all feasible and reasonable measures to limit groundwater inflows to stations and crossovers; and ii. Undertaking groundwater monitoring during construction (levels and quality) in areas identified as 'likely' and 'potential' groundwater dependent ecosystems.	Annexure A (Section 4 and Section 5)
12.1.(a)	The following soil and water management objectives will apply to construction: i. Minimise pollution of surface water through appropriate erosion and sediment control; ii. Minimise leaks and spills from construction activities; iii. Maintain existing water quality of surrounding surface watercourses; iv. Source construction water from non-potable sources, where feasible and reasonable; and v. For on-airport works, the Sydney Metro Western Sydney Airport Soil and Water CEMP will detail all the soil and water management objectives and will be consistent with the WSA Soil and Water CEMP, including all appendices to the CEMP.	Section 1.3
12.2 (a)	On-airport management of soil and water will be achieved through the implementation of the SMWSA Soil and Water CEMP and Principal Contractors will develop and implement a Soil and Water Management Plan for all off-airport works. Both plans will include as a minimum:	This Sub-Plan
12.2 (a)i	The soil and water mitigation measures as detailed in the planning approval documentation and sustainability requirements	Section 7.4 to 7.10 Refer to Element 4 for specific cross-references for each soil and water mitigation measure as detailed in the Planning Approval
12.2 (a)ii	Details of construction activities and their locations, which have the potential to impact on water courses, storage facilities, stormwater flows, and groundwater	Section 2.4

No.	Requirement	Reference
		Section 5
12.2 (a)ii	Surface water and ground water impact assessment criteria consistent with the principles of the Australian and New Zealand Environment Conservation Council (ANZECC) guidelines for off-airport works and the Airports (Environment Protection) Regulations 1997 for on-airport works (with due consideration of the ANZECC guidelines)	Annexure A (Section 1.6) Annexure B (Section 3.2.6)
12.2 (a)iv	Management measures to be used to minimise surface and groundwater impacts, including identification of water treatment measures and discharge points, details of how spoil and fill material required by the project will be sourced, handled, stockpiled, reused and managed; erosion and sediment control measures; salinity control measures and the consideration of flood events	Section 7 Spoil Management Sub-Plan
12.2(a)v	A contingency plan, consistent with the NSW Acid Sulphate Soils Manual (EPA 1998), to deal with the unexpected discovery of actual or potential acid sulphate soils both on and off-airport lands. The plan must including procedures for the investigation, handling, treatment and management of such soils and water seepage	Section 7.9.3 Annexure C
12.2(a)vi	Management measures for contaminated material (soils, water and building materials) and a contingency plan to be implemented in the case of unanticipated discovery of contaminated material, including asbestos, during construction	Section 7.9.1 Annexure C
12.2(a)vii	A description of how the effectiveness of these actions and measures would be monitored during the proposed works, clearly indicating how often this monitoring would be undertaken, the locations where monitoring would take place, how the results of the monitoring would be recorded and reported, and, if any exceedance of the criteria is detected how any non-compliance can be rectified	Element 2: Monitoring and reporting
12.2(a)viii	The requirements of any applicable licence conditions	Section 3.3
12.2(a)ix	The responsibilities of key project personnel with respect to the implementation of the plan	Section 8
12.2(a)x	Procedures for the development and implementation of Progressive Erosion and Sediment Control Plans;	Section 9.2
12.2(a)xi	Identification of locations where site specific Stormwater and Flooding Management Plans are required; and	CEMP (Section 6.8)
12.2(a)xii	Compliance record generation and management.	Section 9.5
12.2(b)	Principal Contractors will develop and implement Progressive Erosion and Sediment Control Plans (ESCPs) for all active worksites in accordance with Managing Urban Stormwater: Soils & Construction Volume 1 (Landcom, 2004) (known as the “Blue Book”). The ESCPs will be approved by the Contractor’s Environmental Manager (or delegate) prior to any works commencing (including vegetation clearing) on a particular site. Copies of the approved ESCP will be held by the relevant Contractor personnel including the Engineer and the Site Foreman.	Section 9.2
12.2 (c)	ESCPs will detail all required erosion and sediment control measures for the particular site at the particular point in time and be progressively updated to reflect the current site conditions. Any amendments to the ESCP will be approved by the Contractor’s Environmental Manager (or delegate).	Section 9.2
12.2 (d)	Principal Contractors will develop and implement Stormwater and Flooding Management Plans for the relevant construction sites. These plans will identify the appropriate design standard for flood mitigation based on the duration of construction, proposed activities and flood risks. The plan will develop procedures to ensure that threats to human safety and damage to infrastructure are not exacerbated during the construction period.	CEMP (Section 6.8)
12.2 (e)	Principal Contractors will undertake the following soil and water monitoring as a minimum: i. Weekly inspections of the erosion and sediment control measures. Issues identified would be rectified as soon as practicable;	Section 9.4

No.	Requirement	Reference
	ii. Additional inspections will be undertaken following significant rainfall events (greater than 20 mm in 24 hours); and iii. All water will be tested (and treated if required) prior to discharge from the site in order to determine compliance with the appropriate approvals and licencing. No water will be discharged from the site without written approval of the Contractor's Environmental Manager (or delegate). This is to form a HOLD POINT.	Element 2 (Section 1.3) Section 7.5
12.2 (f)	The following compliance records will be kept by the Principal Contractors: i. Copies of current ESCPs for all active construction sites; ii. Records of soil and water inspections undertaken; iii. Records of testing of any water prior to discharge; and iv. Records of the release of the hold point to discharge water from the construction site to the receiving environment.	Section 9.5
12.2 (g)	The following water resources management objectives will apply to the construction of the project: i. Minimise demand for, and use of potable water; ii. Maximise opportunities for water re-use from captured stormwater, wastewater and groundwater; iii. Examples of measures to minimise potable water consumption include: ▪ Water efficient controls, fixtures and fittings in temporary facilities; ▪ Collecting, treating and reusing water generated in tunnelling operations, concrete batching and casting facility processes; ▪ Using recycled water or treated water from onsite sources in the formulation of concrete; ▪ Harvesting and reusing rainwater from roofs of temporary facilities; σ Using water from recycled water networks; ▪ Collecting, treating and reusing groundwater and stormwater; ▪ Using water efficient construction methods and equipment; and ▪ Providing designated sealed areas for equipment wash down	Section 1.3 Section 7.3
12.3 (a)	The on-airport Soil and Water CEMP and the off-airport Soil and Water Management Plan will include the following surface water and flooding mitigation measures as well as any relevant Conditions: i. Clean water will be diverted around disturbed site areas, stockpiles and contaminated areas; ii. Control measures will be installed downstream of works, stockpiles and other disturbed areas; iii. Exposed surfaces will be minimised, and stabilised / revegetated as soon feasible and reasonable upon completion of construction; iv. iv. Dangerous goods and hazardous materials storage will be within bunded areas with a capacity of 110 per cent of the maximum single stored volume; v. Chemicals will be stored and handled in accordance with relevant Australian standards such as: – AS 1940-2004 The storage and handling of flammable and combustible liquids – AS/NZS 4452:1997 The storage and handling of toxic substances – AS/NZS 5026:2012 The storage and handling of Class 4 dangerous goods – AS/NZS 1547:2012 On-site domestic wastewater management vi. Spill kits will be provided at the batch plants, storage areas and main work sites;	Section 7.4 Section 6.1 Annexure C

No.	Requirement	Reference
	vii. A protocol will be developed and implemented to respond to and remedy leaks or spills. viii. A remedial action plan and unexpected finds protocol would be established to facilitate the quarantining, isolation and remediation of contamination identified throughout the construction programme. Any asbestos identified on site would be managed in accordance with applicable regulatory requirements.	

Definitions

Term	Description
ACC	Areas of Contamination Concern
ACM	Asbestos Containing Material
ANZECC	Australian and New Zealand Environment and Conservation Council
AS/NZS	Australian Standard/New Zealand Standard
ASS	Acid sulfate soils
CEMF	Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan
CoA	Condition of Approval
CPBG	CPB Contractors Ghella Joint Venture
CSSI	Critical State Significant Infrastructure
DGV	Default Guideline Value
DPE	NSW Department of Planning and Environment
DPI	NSW Department of Primary Industry
DSI	Detailed Site Investigation
EIS	Environmental Impact Statement
EMS	Environmental Management System
ENM	Excavated Natural Material
EPA	NSW Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1994 (NSW)
EPL	Environment Protection Licence
ER	Environmental Representative
ESCP	Erosion and Sediment Control Plan
GDE	Groundwater Dependent Ecosystem
GWMP	Groundwater Monitoring Program
ISO	International Standards Organisation
PASS	Potential Acid Sulphate Soils
PESCP	Progressive Erosion and Sediment Control Plan
PFAS	Perfluoroalkyl and Polyfluoroalkyl Substances
POEO Act	Protection of the Environment Operations Act 1997 (NSW)
Project	Sydney Metro Western Sydney Airport

Term	Description
RAP	Remediation Action Plan
REMM	Revised Environmental Mitigation Measures
SBT Works	Station Boxes and Tunnelling Works
SEEC	Strategic Environmental and Engineering Consulting
SEP	Site Environmental Plan
SMWSA	Sydney Metro Western Sydney Airport
SSI 10051	State Significant Infrastructure project 10051 (this Project)
SWMP	Soil and Water Management Sub-Plan (this document)
SWQMP	Surface Water Quality Monitoring Program
TBM	Tunnel boring machine
VENM	Virgin excavated natural material
WSI	Western Sydney International
WTP	Water treatment plant

Part A: Overview

1. Introduction

1.1. Purpose and application

This NSW (Off-airport) Soil and Water Management Sub-plan (SWMP or Sub-Plan) is applicable to the Station Boxes and Tunnelling Works (SBT Works) Package of the Sydney Metro Western Sydney Airport (the Project). This Sub-plan describes how the CPB Contractors Ghella Joint Venture (CPBG) will minimise and manage the soil and water impacts of the SBT Works in NSW.

This Sub-Plan has been prepared to address the requirements of the:

- State Significant Infrastructure (SSI) 10051 Planning Approval (dated 23 July 2021)
- Sydney Metro Western Sydney Airport – CSSI Staging Report (Staging Report)
- AS/NZS ISO 14001:2016 Environmental Management Systems – Requirements with guidance for use
- Sydney Metro Construction Environmental Management Framework (CEMF)
- Environmental Impact Statement (EIS) and the Submissions Report, including the Revised Environmental Mitigation Measures (REMMs)
- Contractual requirements, including the SBT Design and Construction Deed and General and Particular Specifications
- Applicable legislation (NSW and Commonwealth).

1.2. Sub-Plan context

To achieve the intended environmental performance outcomes of the Project, CPBG have an established Environmental Management System (EMS) in accordance with the requirements of ISO 14001:2016. Guided by the Environment and Sustainability Policy, the EMS consists of a Construction Environmental Management Plan (CEMP), aspect-specific procedures and Sub-Plans as illustrated in (Figure 1). Implementation of the EMS is achieved through tools, checklists and forms as detailed in Section 5.2 of the CEMP.

Environment and Sustainability Policy

Construction Environmental Management Plan*

Sub-Plans

- Construction Noise and Vibration Management Sub-Plan (including monitoring program)
- Soil and Water Management Sub-Plan (including groundwater & surface water monitoring programs)
- Flora and Fauna Management Sub-Plan
- Spoil Management Sub-Plan
- Waste and Recycling Management Sub-Plan

Procedures

- Air Quality Management and Monitoring Procedure (CEMP, Annexure B)
- Visual Amenity Management Procedure (CEMP, Annexure B)
- Heritage Unexpected Finds Workflow Procedure (CEMP, Annexure B)
- Aboriginal Heritage Management Procedure (CEMP, Section 6.5)
- Non-Aboriginal Heritage Management Procedure (CEMP, Section 6.6)
- Spill Management Procedure (CEMP, Annexure B)
- Out of Hours Works Management Procedure (Construction Noise and Vibration Management Sub-Plan, Annexure B)
- Vibration Assessment Procedure (Construction Noise and Vibration Management Sub-Plan, Annexure C)
- Tree Clearing and Grubbing Procedure (Flora and Fauna Management Sub-Plan, Annexure B)
- Fauna Handling Procedure (Flora and Fauna Management Sub-Plan, Annexure D)
- Dam Dewatering Procedure for Aquatic Fauna Management (Flora and Fauna Management Sub-Plan, Annexure E)
- Unexpected Finds Procedure (Flora and Fauna Management Sub-Plan, Annexure F)
- Weed Management Procedure (Flora and Fauna Management Sub-Plan, Annexure G)
- Contingency Groundwater Monitoring Procedure (Soil and Water Management Sub-Plan, Annexure C)
- Erosion and Sediment Control Procedure (Soil and Water Management Sub-Plan, Annexure C)
- Water Reuse and Discharge Management Procedure (Soil and Water Management Sub-Plan, Annexure C)

Figure 1: EMS Overview

1.3. Objectives and performance outcomes

The objectives and performance outcomes for soil and water management are to ensure:

- Compliance with the SSI 10051 Planning Approval, including
  - Minimising the demand for, and use of potable water
  - Maximising opportunities for water re-use from captured stormwater, wastewater and groundwater
- Compliance with the Environment Protection Licence (EPL) 21672 for the SBT Works
- Appropriate controls are implemented to minimise leaks and spills, prevent pollution of groundwater, minimise impacts on groundwater dependent ecosystems (GDEs) and maintain the existing water quality of the receiving environment
- Appropriate erosion and sediment controls are implemented to minimise pollution of surface water
- Adequate processes are implemented to managed contaminated land and/or potentially contaminated groundwater in accordance with Detailed Site Investigations (DSIs) and Remediation Action Plans (RAPs) where applicable
- Reasonable and feasible measures are implemented to maximise water recycling, use of non-potable water and water reuse on site
- Reasonable and feasible measures are implemented to reduce the potential for drawdown of surrounding groundwater resources.

1.4. Consultation and approval

Reflecting the requirements of Conditions A6, C5(c), C13(b), C13(c), this Sub-Plan and associated monitoring programs (Groundwater Monitoring Program (GWMP) and Surface Water Quality Monitoring Program (SWQMP), Annexure A and Annexure B, respectively) have been prepared in consultation with DPE Water, DPI Fisheries, Environment Protection Authority (EPA) (SWQMP only), Penrith City Council and City of Liverpool Council (Table 1).

A detailed consultation report, including matters raised by stakeholders and CPBG responses is provided in Annexure D.

This Sub-Plan (including the GWMP and SWQMP) was updated to address any relevant comments prior to submission to the Environmental Representative (ER) for endorsement. In accordance with the Staging Report, the GWMP (Annexure A) will also be submitted to the Planning Secretary of the DPE for approval (Table 1). The submission of this Sub-Plan, the GWMP and SWQMP to the ER and the Planning Secretary (GWMP only) will occur no later than one month before the commencement of the Bulk Excavation and Tunnelling Works.

Construction will not commence until this Sub-Plan, GWMP and SWQMP have been endorsed by the ER and approved by the Planning Secretary (GWMP only). This Sub-Plan, GWMP and SWQMP, as approved by the Planning Secretary or endorsed by the ER (as per Table 1), including any minor amendments approved by the ER, will be implemented for the duration of the SBT Works.

Table 1: Sub-Plan, GWMP and SWQMP consultation and approval requirements

Document	CPBG Internal Review	Sydney Metro Review	Agency/Stakeholder Consultation	ER Review and Endorsement	Planning Secretary Approval	ER Approval of Minor Amendments
Soil and Water Management Sub-Plan	✓	✓	✓	✓		✓
Groundwater Monitoring Program (GWMP) (Annexure A)	✓	✓	✓	✓	✓	✓
Surface Water Quality Monitoring Program (Annexure B)	✓	✓	✓	✓		✓

1.5. Sub-Plan structure

Part A: Overview	• Section 1: An introduction to the Sub-Plan • Section 2: Overview of the SBT Works • Section 3: Legal and other requirements • Section 4: Existing environment • Section 5: Environmental aspects and impacts • Section 6: Surface water quality and groundwater monitoring programs • Section 7: Management strategy • Section 8: People and collaboration • Section 9: Systems and tools
Part B: Implementation	• Element 1: Training • Element 2: Monitoring and reporting • Element 3: Auditing, review and improvement • Element 4: Package specific requirements
Part C: Annexures	• Annexure A Groundwater Monitoring Program • Annexure B Surface Water Quality Monitoring Program • Annexure C Procedures • Annexure D Consultation Report

2. Project overview

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 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).

2.2. Project description

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 2).

Figure 2: Project Overview

2.3. Project Staging

2.3.1. Overview

As detailed in the Staging Report, the Project will be delivered through the following stages:

- Advanced and Enabling Works – Site investigations, modification of the existing transport network, power and water supply for construction sites, utility and stormwater diversions and some demolition works.
- SBT Works – 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 (the subject of this Sub-Plan) – Preparatory Works (works not completed prior to approval of this CEMP), bulk excavation, acoustic shed installation, tunnelling and cross passage installation.
- Surface and Civil Alignment Works – Construction of bridges and viaducts to cross floodplains, watercourses and existing and proposed permanent infrastructure.
- Stations, Systems, Trains, Operations and Maintenance – Station design and fit-out, testing and commissioning, and operation of the Western Sydney Airport metro service
- Finalisation Auxiliary Works.

2.4. SBT Works Scope

2.4.1. Station Boxes and Tunnelling 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 (off-airport) and Western Sydney International (WSI) airport to the new Aerotropolis Station (off-airport)
- 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 (off-airport), Orchard Hills (off-airport), Airport Terminal (on-airport) and Aerotropolis (off-airport)
- Excavations for two intermediate service facilities, one in each of the tunnel sections at Claremont and Bringelly (both off-airport).

An overview of the SBT Works at each worksite is provided in Table 2.

Table 2: SBT Works overview

Jurisdiction	Worksite	Indicative scope of works
NSW	St Marys	• Preparatory CEMP scope (not completed prior to approval of this CEMP) • Demolition of existing industrial premises • Offices, amenities, car parking and access roads • Piling and station box excavation using rippers and rock hammers • Stub tunnel excavation using roadheaders • TBM retrieval
NSW	Claremont Meadows	• Preparatory CEMP scope (not completed prior to approval of this CEMP) • Offices, amenities, car parking, and access roads • Piling and services facility shaft excavation using ripper and rock hammers • Construction of part of the cast-in-situ permanent shaft

Jurisdiction	Worksite	Indicative scope of works
		• Cross passage construction support • Invert construction support (subject to Sydney Metro approval)
NSW	Orchard Hills	• Preparatory CEMP scope (not completed prior to approval of this CEMP) • Demolition of existing buildings and removal of septic tanks • Offices, amenities, car parking, and access roads • Lansdowne Road temporary diversion and construction of the permanent road bridge • Piling and portal, station box and dive excavation using rippers and rock hammers • Construction of cast-in-situ permanent portal structure • TBM assembly, launch and tunnelling support works • Cross passage construction support • Precast segment storage
On-Airport	Airport Portal Dive Structure	• Offices, amenities, car parking and access roads • Piling and portal excavation using rippers and rock hammers • Open cut dive excavation using rippers and rock hammers • Construction of cast-in-situ permanent dive structure • TBM assembly, launch and tunnelling support works • Cross passage construction support
On-Airport	Airport Terminal and TBM shaft	• Offices, amenities, car parking and access roads • Piling and station box and shaft excavation using rippers and rock hammers • TBM re-launch and tunnelling support works • Cross passage construction support
On-Airport	Primary Spoil Receival	• Access road • TBM spoil conveyor set up • Earthworks in accordance with Sydney Metro Specifications
NSW	Bringelly	• Preparatory CEMP scope (not completed prior to approval of this CEMP) • Offices, amenities, car parking and access roads • Piling and services facility shaft using rippers and rock hammers • Construction of part of the cast-in-situ permanent shaft • Cross passage construction support • Invert construction support (subject to Sydney Metro approval)
NSW	Aerotropolis	• Preparatory CEMP scope (not completed prior to approval of this CEMP) • Offices, amenities, car parking and access roads • Piling and Station box excavation using rippers and rock hammers • Stub tunnel excavation using roadheaders • TBM retrieval

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 this Sub-Plan.

2.4.2. Construction methodology

The construction methodology for the SBT Works entails:

- Utility works including removal, diversion, protection and connection to SBT worksites
- Local area works including provision of site accesses and some road upgrades
- Site establishment works including:
  - Fencing

  - Installation of environmental mitigation including erosion and sediment controls, noise barriers, and acoustic enclosures
  - Clearing and grubbing of existing vegetation
  - Demolition of existing buildings and structures
  - Site levelling and drainage works
  - Establishment of internal access roads, hardstand areas and onsite parking
  - Erection of demountable buildings including offices and amenities
  - Other ancillary facility works including the erection of sheds, establishment of materials laydown and stockpiling areas and Tunnel Boring Machines (TBMs) support works including spoil conveyors.

- Construction of station, shaft and dive excavations predominately completed by piling and excavators with rippers and hammers. A roadheader will also be used at St Marys and Aerotropolis to complete the stub tunnels
- Four TBMs will be used to construct the mainline tunnels as follows:
  - Two earth pressure balance TBMs will be launched from Orchard Hills tunnel approximately 4.3 km north to St Marys, including traversing the Claremont Shaft, and be retrieved from the St Marys Station Box.
  - Two double shield TBMs will be launched from the Airport Dive and tunnel south, traverse the Airport Terminal Station Box and Shaft, whereupon tunnelling will cease, and the conveyor and backend equipment will be demobilised from the Airport Dive and re-established at Airport Terminal Shaft. The TBMs will recommence tunnelling including traversing the Bringelly Shaft and be retrieved from the Aerotropolis Station Box (a distance of 5.5 km from the Airport Dive, with 2.5 km of the southern tunnels located off-airport within NSW).
  - Cross passages will be constructed using concrete saws and excavators with hammers.

It is anticipated that the shaft and station excavations will be completed in advance of TBM tunnel construction. The TBMs will be delivered via oversize heavy vehicles to Orchard Hills and the Airport Dive site and retrieved from St Marys and Aerotropolis, subject to relevant approvals.

The SBT Works do not include any surface works between the northern and southern tunnel sections, which are to be undertaken by another contractor as part of the Surface and Civil Alignment Works stage.

Tunnelling, including station box, shaft and dive excavation, and associated support activities, will be undertaken 24 hours a day, seven days per week. Utility and local area works which cannot be completed during standard daytime hours due to Road Occupancy Licence (ROL) requirements or utility authority requirements will also be undertaken outside of standard hours.

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.

Changes to the SBT Works scope may be required to facilitate constructability, amenity and staging. This may include but is not limited to refinement of site layouts based on detailed construction planning and safety assessment. For example:

- Relocation of internal access roads to allow for refinements in heavy vehicle/light vehicle movements
- Separation of people and plant
- Alteration to car parking/container and laydown areas to allow for safe working distances
- Movement of portable site offices, workshops and containers for construction staging.

As detailed in CEMP (Section 7.12.2), any changes to SBT Work scope will be provided to the ER for endorsement in accordance with Condition A32(j).

3. Legal and other requirements

3.1. Legislation

This Sub-Plan has been prepared in accordance with the:

- *Environmental Planning and Assessment Act 1979* (EP&A Act)
- *Protection of the Environment Operations Act 1997* (POEO Act)
- *Contaminated Land Management Act 1997* (CLM Act)
- *Water Management Act 2000* (WM Act)
- National Environment Protection Council (NEPC) National Environment Protection (Assessment of Site Contamination) Measure 1999 (amended 2013) (NEPC, 2013).

3.2. Guidelines

Guidelines and standards relating to the management of construction soil and water risks on the SBT Works include:

- Guidelines for Consultants Reporting on Contaminated Land (EPA, 2020)
- Guidelines for the NSW Site Auditor Scheme (3rd edition) (EPA, 2017)
- Guidelines for the Assessment and Management of Groundwater Contamination (DEC, 2007)
- Managing Urban Stormwater: Soils and Construction (Volume 1 of the Blue Book) (Landcom, 2004)
- Managing Urban Stormwater: Soils and Construction – Volume 2D: Main Road Construction (Volume 2D of the Blue Book) (DECC, 2008)
- National Environment Protection (Assessment of Contamination) Measure amendment 2013 (NEPM 2013)
- Industrial Waste Resources Guidelines (EPA Victoria)
- Australian and New Zealand Guidelines for Fresh and Marine Water Quality (collectively known as the ANZECC Guidelines) (ANZECC/ARMCANZ, 2000a)
- Australian and New Zealand Guidelines for Water Quality Monitoring and Reporting (collectively known as the ANZECC Guidelines) (ANZECC, 2000)
- Acid Sulphate Soil Manual. Acid Sulphate Soil Management Advisory Committee, NSW (ASSMAC, 1998)
- Fisheries Guidelines for Fish-friendly Structures (QLD DPI & Fisheries, 2006)
- Policy and guidelines for fish habitat conservation and management (NSW DPI, 2013)
- PFAS National Environmental Management Plan Version 2.0 (National Chemicals Working Group of the Heads of EPAs Australia and New Zealand, 2020).

3.3. Other environmental requirements

Other environmental requirements relevant to managing construction soil and water issues that are addressed in or by this Sub-Plan include the conditions of EPL 21672 (refer to Element 4: Project Specific Requirements).

4. Existing environment

4.1. Soil types

Soil Landscape Mapping sourced from the NSW Government eSpade portal reveals that the off-airport areas of the Project lie on the Blacktown and South Creek Soil Landscapes:

- The Blacktown Soil Landscape occurs on broad rounded crests and ridges with gently inclined slopes and undulating rises on Wianamatta Group shales. Local relief ranges to about 30 m and slopes are usually >5%. Soils include red and brown duplex soils on crests and midslopes, grading to yellow duplex soils on lower slopes and around drainage lines. Soils are commonly acidic, with low permeability, low wet bearing strength and low to moderate fertility. Subsoils are often moderately reactive. Subsoils are often dispersive (sodic) and salinity occurs sporadically.
- The South Creek Soil Landscape comprises the present active floodplain of numerous drainage networks of the Cumberland Plain. Slopes are typically less than 5%. Soils include deep, layered sandy to clayey sediments deposited by the present South Creek drainage network. The soils are characterised by seasonal waterlogging, localised permanently high water tables, localised salinity, and localised dispersive soils (sodicity).

4.2. Salinity

Salinity is caused by the accumulation of salts within soil, surface water and groundwater from natural conditions that has been accelerated in areas by anthropogenic activities. In Western Sydney, salinity issues are mostly associated with dryland salinity. The Salinity Potential in the Western Sydney Map (Department of Infrastructure, Planning and Natural Resources, 2002) shows areas of known salinity, and high and moderate salinity potential in parts of the off-airport study area. The known areas within the off-airport environment are:

- The riparian zone and unnamed creek just south of Patons Lane
- Badgerys Creek at Bringelly.

There is high salinity potential for the areas around all watercourses (Department of Infrastructure, Planning and Natural Resources, 2002). The remainder of the study area is mapped as having moderate salinity potential. The salinity risk is shown on Figure 1.

4.3. Contamination

Review of previous environmental assessment reports for the alignment identified a number of Areas of Environmental Concern (AEC) within the project alignment that may warrant further consideration. The following sub-sections summarise the previously identified contamination issues within the project alignment.

4.3.1. St Marys

The EIS has identified numerous potential sources of contamination in the vicinity of St Marys Station including but not limited to former service stations, dry cleaners, ammunition factories, and underground storage tanks (USTs).

Previous investigations beneath the former dry cleaner located at 1-7 Queen Street identified the presence of chlorinated hydrocarbons including elevated concentrations of tetrachloroethene (PCE) in soil. Tricholoethene (TCE) which is a degradation product of PCE is also present in soil. PCE and TCE are also present in groundwater and there is the potential for phase separated (i.e. not mixed with groundwater) PCE to be present beneath this site as well as in dissolved phase. At this stage, the extent and maximum concentrations of PCE and TCE in both soil and groundwater have not been confirmed beneath the footprint of the former dry cleaners and in materials to be intersected during tunnel boring.

4.3.2. Claremont Meadows

Review of the information indicates that this portion of the project area has historically been largely characterised by agricultural land use. While currently vacant, residential houses have previously been situated on the property, with some stockpiling of building materials and soil also observed.

To date, very little sampling has been undertaken within this portion of the project, and while there have been some detectable concentrations of Contaminants of Concern (CoC) most notably PFAS, with the exception of concentrations of nickel which were slightly above the CT1 threshold in one sample and concentrations of TRH C16-C34 of 750 mg/kg which exceeds ESL of 300 mg/kg, concentrations of CoC were less than the adopted human health and ecological criteria and less than CT1 criteria.

While not confirmed, given the age of former structures at the site, it is considered that there is a potential for bonded asbestos-containing materials (ACM) to be present in fill materials associated with poor demolition practices and/or due to the importation of poor-quality fill historically.

Based on the available data, it is expected that fill would be classified as General Solid Waste, with portions of fill soils likely requiring management as Special Waste (Asbestos Waste). However additional assessment is required to confirm this classification and weather natural soils meet the definition of VENM or ENM.

To date, no significant indication of contamination being present within groundwater has been identified within the single available monitoring location. While service stations have been noted to the east of the proposed Claremont Meadows service facility, it is estimated that groundwater flow direction in the vicinity of the service stations is to the east away from the alignment. In addition, it is considered that drawdown in the vicinity of the service stations is likely to be minor and therefore, although the groundwater gradient to the east toward South Creek it may flatten or possibly reverse during excavation. It is considered that significant migration of petroleum hydrocarbons in groundwater through the Bringelly Shale aquifer back to the excavation is considered unlikely.

4.3.3. Orchard Hills

Review of available information indicates that the Orchard Hills Project Area has largely been characterised by agricultural landuse, both historically and currently (potential AEC's include workshops and storage sheds, waste storage areas, and soil stockpiles etc.). Site investigations had previously identified a suspected cattle dip. Further investigations have noted that this may have been an old farm storage shed rather than a dip site however will be subject to further investigation.

To date, there is no site investigation data collected directly from within the Orchid Hills Station footprint and limited data within the Orchid Hills Project Area. Based on the limited available information, concentrations of CoC were less than commercial/industrial landuse criteria, with fill likely being classified as GSW. While not identified, given the landuse setting it is considered that there is a potential for ACM to be present in fill soils, attributed to either poor historic demolition practices or associated with importation of fill of a poor or unknown quality.

As there is no existing relevant soil data for the Station Box and the broader Orchard Hills Project Area, it is not possible to quantify the waste categories of materials to be disturbed or determine their suitability for reuse.

A review of analytical data identified concentrations of TRH and toluene in samples collected from four groundwater wells indicated that there may be a potentially unknown source(s) of hydrocarbon contamination in the area. Chloroform and dichloromethane were also detected however at this stage it is considered these detections may be a by-product of a leaky potable water pipe. Detectable concentrations of PFAS and select pesticides were also identified in groundwater samples.

4.3.4. Bringelly

A review of the available information indicates the Bringelly site footprint has been characterised by rural/agricultural landuse with a large, centrally located dam with soil mounds observed surrounding the dam. Review of Google Earth images also identified several structures including sheds and debris footprints to the east, and a residential building in the south-east corner of the site.

To date there is very little sampling data for the site, however there were no exceedances of concentrations in CoC's identified, although it is noted that detectable concentrations of PFAS and polychlorinated byphenyls (PCBs) were observed in fill material within the station box.

While not confirmed, given the likely age of former structures at the site and the debris observed in satellite images, it is considered that there is a potential for bonded ACM to be present in and on fill materials associated with poor demolition practices or due to the importation of poor-quality fill historically.

Based on the available data, it is likely that fill would be classified as General Solid Waste, with portions of fill soils likely requiring management as Special Waste (Asbestos Waste). Additional assessment is required to confirm classification and whether natural soils meet the definition of VENM or ENM, however it is estimated that natural soils likely meet the definition of VENM.

There is also currently only limited groundwater data collected from one well at the site.

4.3.5. Aerotropolis

Review of the available information indicates the Aerotropolis site footprint has been characterised by rural/agricultural landuse. There are a number of structures on the site including a residential house and sheds. An underground storage tanks (UST) was previously identified at the property adjacent to the north-eastern corner of the main building. Soil samples collected from four boreholes drilled in close proximity to the UST did not identify concentrations of CoC in excess of the adopted criteria and concentrations of BTEX and TRH were less than the laboratory limit of reporting (LOR).

A septic system is also present to the north of the main building. Concentrations of CoC[1] collected from 3 boreholes around the septic system were less than the adopted criteria and largely less than the laboratory LOR.

Fill material surrounding existing structures has also been observed to contain bonded ACM. The source of ACM is expected to be associated with debris from existing buildings, poor historic demolition practices, and/or importation of poor-quality fill in the past. ACM is anticipated to be randomly distributed throughout the fill.

It is expected that the majority of fill will be GSW with some volumes possibly classified as Restricted Solid Waste or Hazardous Waste and some volumes of fill also requiring management as Special Waste / Asbestos Waste.

4.3.6. Tunnel Section: St Mary's Station to Claremont Meadows

The EIS has identified numerous potential sources of contamination in the vicinity of St Mary's Street Station as outlined in Section 4.3.1.

Near the interface with the station box the tunnel passes directly beneath a former dry cleaner at 1-7 Queen Street (approximately Chainage 17,850) where previous investigations have identified the

[1] Not including biological pathogens such as coliforms.

presence of chlorinated hydrocarbons. A review of the available contamination data for 1-7 Queen St and the potential implications for the design and construction of the Station Box and tunnel has been undertaken.

At this time, it is not known whether contamination from chlorinated hydrocarbons extends to the tunnel alignment, and what the maximum concentrations of PCE/TCE are in soil/groundwater across this former dry cleaner property as well as materials to be intersected during tunnel boring.

From approximately Chainage 18,100 to South Creek at the Kingsway athletic/rugby fields (Blair Oval, Chainage (18,750) the EIS describes historic excavations and trenches. However, the EIS does not describe whether any contaminated materials have been buried at these locations and if present, whether these could potentially impact materials to be tunnelled.

Between Chainage 17,800 and Chainage 18,750 there is one borehole with sampling data. This location (BH-A203) is at approximately Chainage 18,250 and is not located in areas where potential sources of contamination have been identified in the EIS along the tunnel alignment (i.e. the dry cleaners and the historic excavations and trenches). Soil samples from this borehole at tunnel bore excavation depths did not identify potential contaminants of concern. The pH of natural materials to be bored however was above the pH range which could preclude classification as ENM, and this finding was also observed at BH-A322 at Chainage 18,800.

Between Chainage 17,800 and Chainage 18,750 groundwater monitoring has been undertaken at Blair Oval (BH-A105/BH-A105S) and Chainage 18,100 (BH-A103). Groundwater sampling from these wells has predominately focussed on metals and anions/cations with limited sampling (one event) for other important potential contaminants of concern including PFAS, hydrocarbons and organic compounds. Positive detection of toluene was reported in BH-A105. PFAS was not detected in the groundwater samples collected from these monitoring wells however this was limited to one sampling event. PFAS has been detected in groundwater at St Marys Station and in the monitoring well next to South Creek (BH-A011) at Chainage 18,800 and is expected to be found in this area.

Between Chainage 18,750 and Chainage 19,900 landuse is largely characterised by playing fields and grassed areas, with some light commercial/industrial landuse noted east of the tunnel alignment near Chainage 19,900 and a service station further east (also at Chainage 19,900). Laboratory data for this length of tunnel alignment is largely absent with only one sample location positioned in the area, although noting that it is north of the alignment and not situated within its footprint.

4.3.7. Tunnel Section: Claremont Meadows to Orchard Hills

There are currently no boreholes/test pits which have directly investigated the material to be bored in the tunnel between Claremont Meadows to the Orchard Hills Project Area. The depth of tunnel from these locations is from approximately 12.5 m AHD to 7.5 m AHD at Claremont Meadows to 32.5 m AHD to 27.5 m at Orchard Hills.

The boreholes closest to this section of tunnel (outside of the Orchid Hills Project Area and Claremont Meadows Shaft Area) where contaminated land soil samples were collected include BH-A121 and BH-A019. These boreholes are located near Claremont Meadows (approximately 40-100 m from the tunnel) however sample depths which included analysis for PFAS was limited to approximately 40 m AHD (i.e. these locations did not include sampling at depths of materials to be intersected by the tunnel).

Between Chainage 20,300 and Chainage 20,800, the tunnel passes alongside the closed Gipps Street Landfill. There is currently no soil data to confirm whether materials to be excavated for the tunnel have been impacted from the former landfill, and no environmental sampling was undertaken from the two wells installed adjacent to the landfill. BH-A019 is the monitoring well which has been sampled and is located approximately 115 m from the tunnel. Impact consistent with the landfill was found in this monitoring well.

Previous investigation of the Gipps Street Landfill described in the EIS reported contamination in groundwater derived from landfill leachate including but not limited to ammonia, metals, pesticides, and other organic compounds. Impact in the shale aquifer beneath the landfill was also reported in the EIS. From the EIS it has been noted that the landfill received domestic and industrial wastes and was in use through to the mid-1980s. Accordingly there would be potential for contaminants such as PFAS which have not thus far been investigated in association with the landfill site.

Between Chainage 20,800 to approximately 21,400, the tunnel passes alongside former poultry farms located on the western and eastern sides of Kent Road. There is currently no existing data to investigate potential impacts from these historical farms.

Detailed site investigation will be required in advance of construction to determine areas of contamination, management measures (including any remediation requirements and health and safety controls which need to be implemented during construction), waste disposal classification, and excavated material re-use options.

4.3.8. Tunnel Section: Airport Dive Tunnel to Aerotropolis

This portion of the alignment is largely characterised by rural/agricultural landuse. Review of laboratory data indicated there were a small number of exceedances in fill of CT1 criteria, namely PFAS, and concentrations of select heavy metals in natural material which exceeded CT1 criteria. It was also noted that there were detectable concentrations of PFAS in both fill and natural material.

Given the predominantly agricultural landuse of the area, it is likely that some fill will be impacted by ACM, likely attributed to poor demolition practices or importation of fill of an unknown or poor quality.

It is considered that most fill material in this portion of the alignment would likely be classified as GSW, with some volumes likely requiring management as Special Waste / Asbestos Waste. Natural soils would likely be classified as VENM or ENM, although the detections of concentrations of PFAS would preclude a quantum of soil from satisfying those definitions.

One groundwater well is positioned within the area, although not in the tunnel alignment footprint. Review of analytical results from that well indicated that there were some exceedances of dissolved metals and ammonia, and a detection of chloroform in one sample. Concentrations of PFAS were not identified.

Further sampling of groundwater is required to adequately characterise the quality of groundwater within the tunnel alignment footprint.

4.4. Acid sulfate soils

Acid sulfate soils (ASS) is the common name given to a range of soil types that react when exposed to air to form sulfuric acid, which can damage built structures and harm animals and plants. The NSW (Off-Airport) environment is considered to have a low probability of ASS. The likelihood of ASS from coastal processes is low given elevation is >10m AHD and the SBT Works is not within a coastal area. Inland ASS can form within saline waterlogged soils with high quantities of organic matter. These may occur in large dams, drainage channels, riparian zones and wetlands within the study area. The areas mapped as high potential or known salinity risk on Figure 3 have the potential to form ASS.

Review of the available information relating to the risk for Acid Sulfate Soils (ASS) to be present in relation to tunnelling areas is low. The underlying geology of the area is largely comprised of Bringelly Shale. Acid generation in the Bringelly Shale appears to be limited to isolated pockets and the overall acid neutralising capacity of the formation is likely to overcome acid that is generated. Mixing and crushing of rock that is inherent in the tunnel excavation process will further improve the neutralisation.

Soil investigations will be undertaken prior to construction to assess the identified potential areas of inland ASS areas where tunnelling excavations are to be undertaken. ASS would be assessed in accordance with ASSMAC[2] (1998) guidelines (and national guidelines where applicable) if greater than one tonne of ASS would be disturbed. An ASSMP will be prepared if the action criteria are exceeded to control earthworks and re-use, and appropriate receiving sites would be selected for excess spoil.

[2] NSW Acid Sulfate Soils Management Advisory Committee (ASSMAC), 1998. Acid Sulfate Soil Assessment Guidelines. August, 1998.

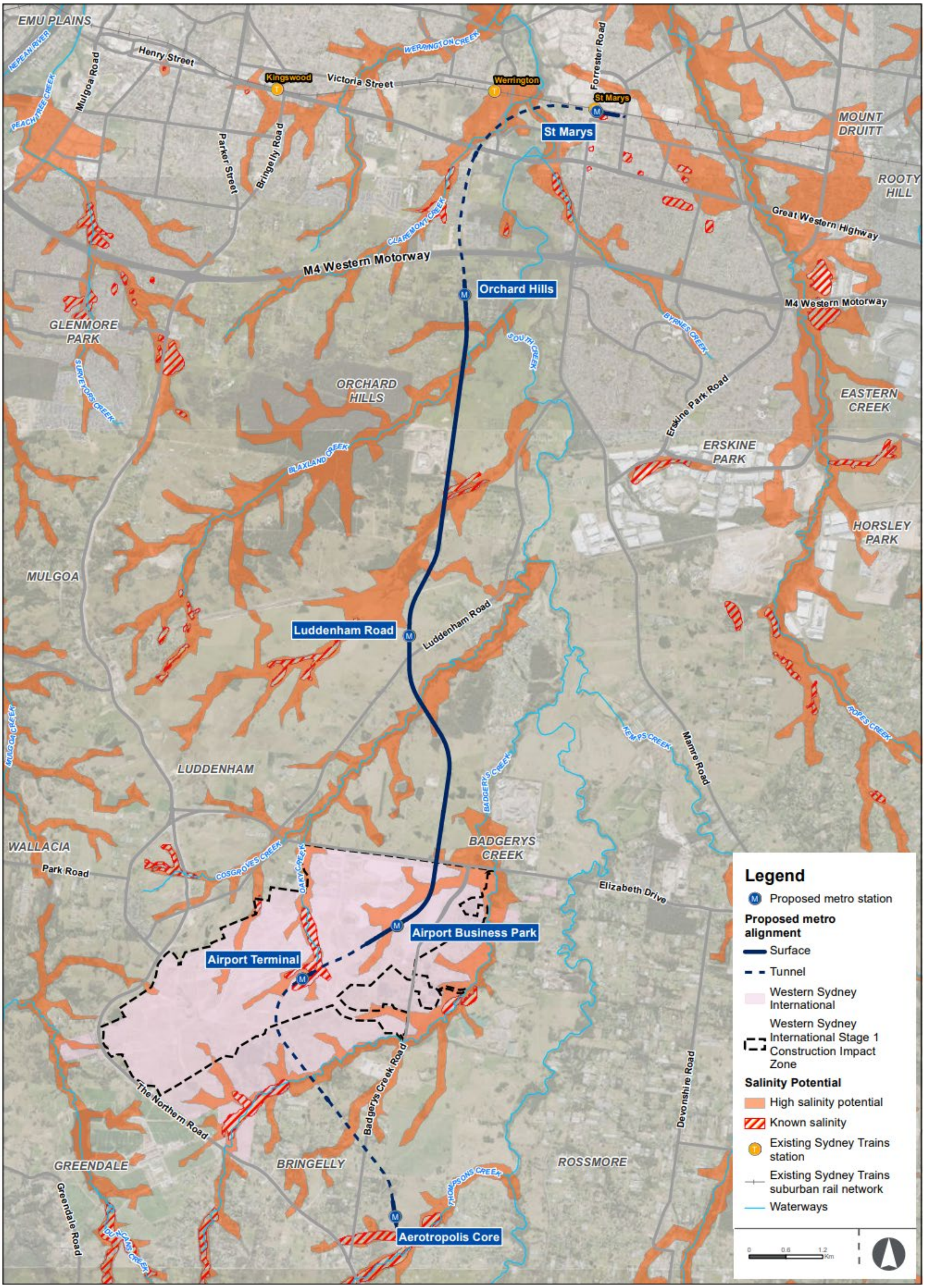

Figure 3: Areas of salinity potential in the project area (EIS Figure 16-1)

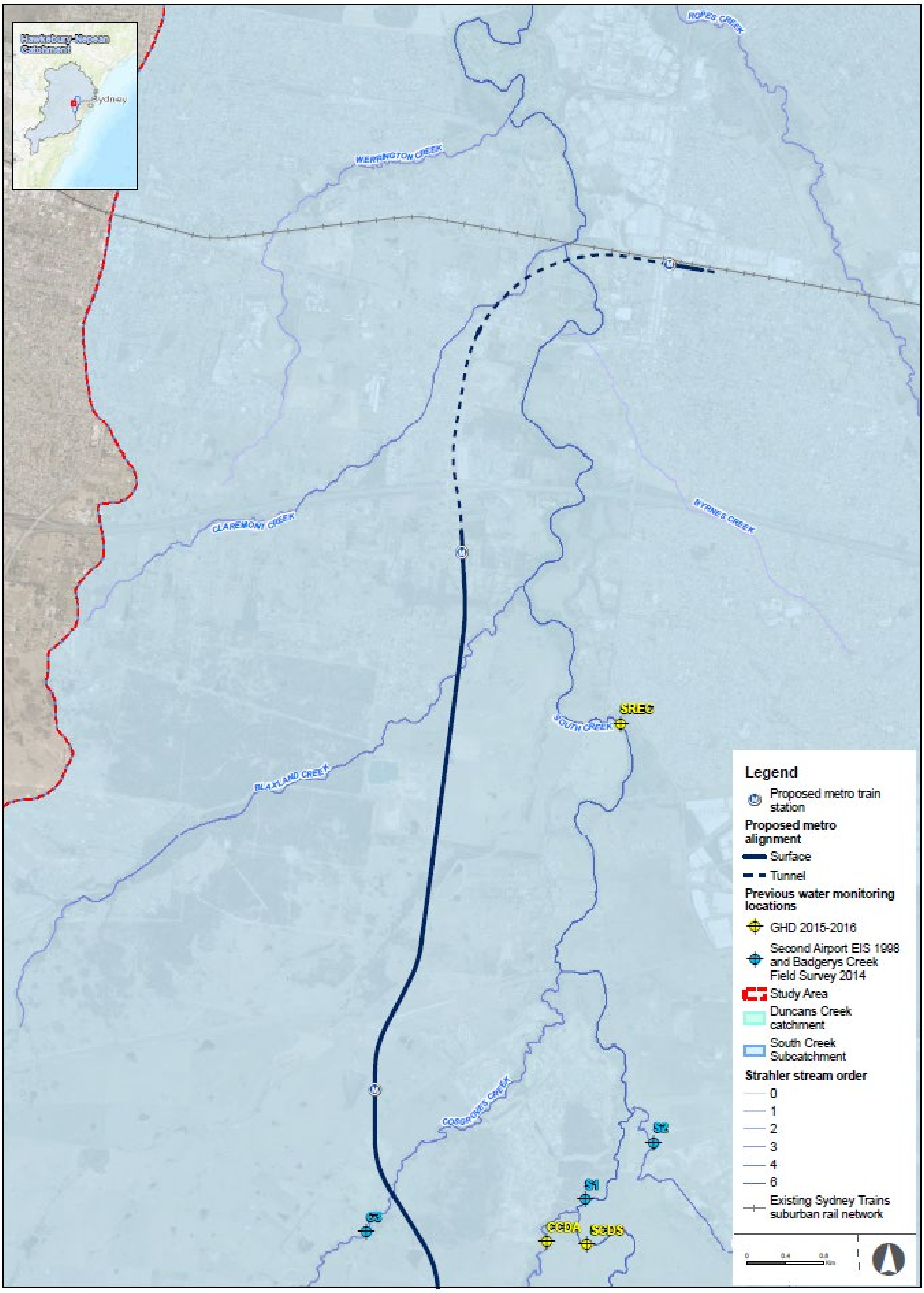

Figure 4: Hydrology of the Project area

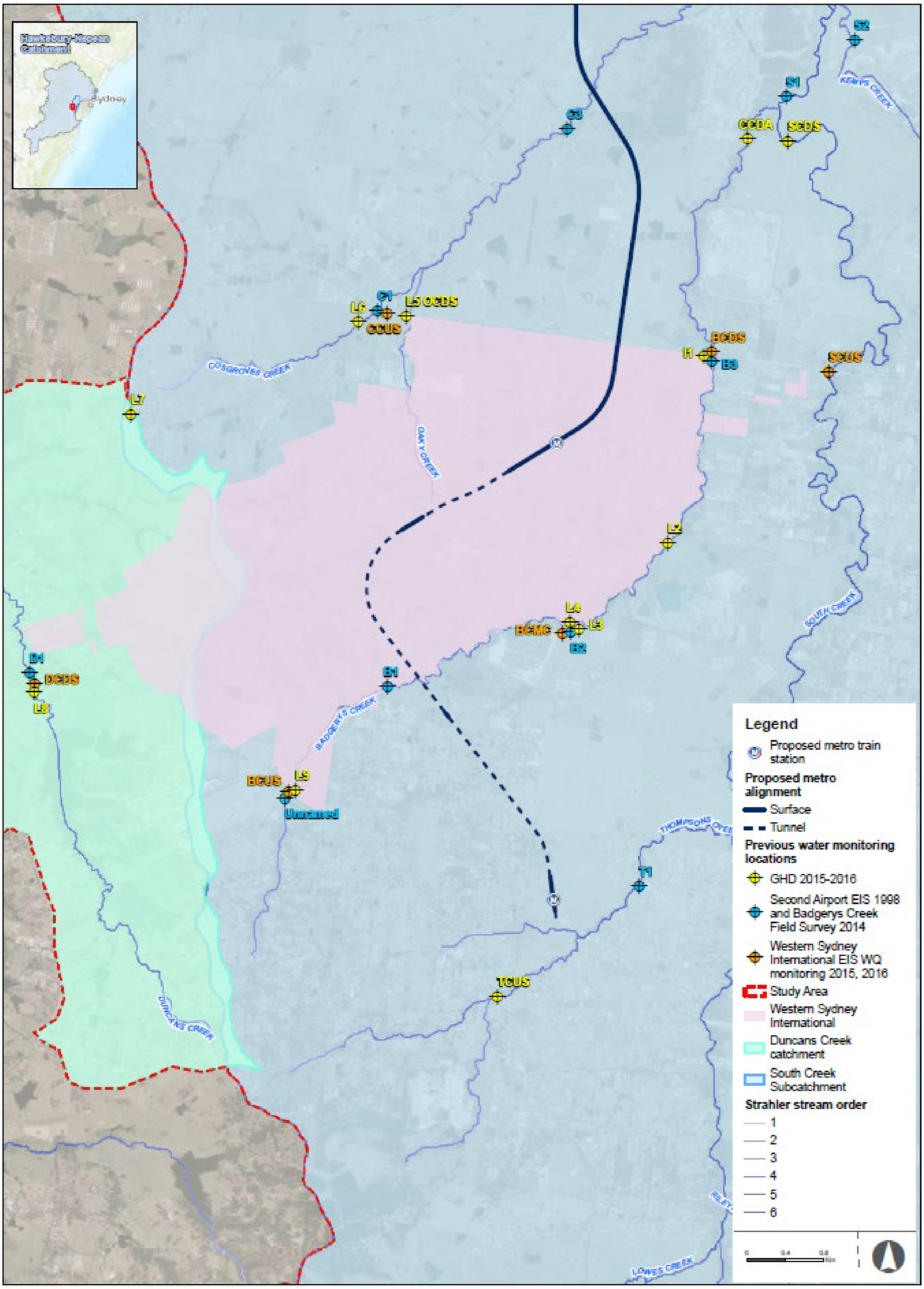

Figure 5: South Creek catchment (EIS Figures 14-1 a and b)

4.5. Surface water

The SBT Works footprint lies entirely within the South Creek catchment. South Creek, a major tributary of the Hawkesbury-Nepean catchment, flows in a generally northerly direction from its headwaters near Narellan through to Windsor where it joins the Hawkesbury River. Figure 2 shows an overview of the Project and the main tributaries within the South Creek catchment around the Project.

Table 3 provides a summary of the waterways located within the vicinity of the SBT Works alignment within NSW.

Table 3: Waterways along the SBT Works alignment within NSW

Waterway	Worksites
South Creek	All
Claremont Creek	St Marys Claremont Meadows Service Facility
Blaxland Creek	Orchard Hills Stabling and Maintenance Facility
Badgerys Creek	Bringelly Service Facility
Thompsons Creek	Aerotropolis Core

South Creek is the receiving waterway for all creeks within the study area.

4.6. Groundwater

4.6.1. Groundwater levels

Groundwater in the off-airport environment was identified predominantly within the Bringelly Shale bedrock at varying depths along the project alignment. Table 4 provides a summary of groundwater levels at key locations along the off-airport sections of the SBT Works.

Table 4: Groundwater levels in the SBT Works area

Location	Groundwater Level (mbgl)	Groundwater elevation (mAHD)
St Marys Station	3.2 to 9.7	24.5 to 33
Claremont Meadows Services Facility	1.6 to 2.4	24.9 to 26
Orchard Hills Station	4.9 to 6.1	66.8 to 68.3
Bringelly Services Facility	2.8 to 7.4	66.2 to 68.7
Aerotropolis Core Station	3.2 to 9.7	24.5 to 33

4.6.2. Groundwater quality

Groundwater sampling results from the geotechnical investigations carried out for the SBT Works and from historical geotechnical investigation reports were used to assess groundwater quality. Groundwater testing was undertaken at the five NSW (Off-Airport) locations of St Marys Station, South Creek, Werrington, Gipps Street landfill and Orchard Hills Station as part of the geotechnical investigations for the SBT Works.

The results of groundwater quality testing indicate that groundwater across the SBT Works may be expected to have elevated salinity (electrical conductivity) and contain elevated concentrations of heavy metals and nutrient load. The pH of the groundwater in the region is observed to be generally acidic to neutral. The pH of groundwater samples ranged from 4.2 to 9.2. However, most samples collected had a pH in the range of 5 to 7.5.

Elevated ammonia and phosphorous was observed in most samples and is likely due to the semi-rural setting of the study area. Agricultural land uses introduce fertilisers and other organic material to the soils over a wide area, which can migrate into underlying groundwater. A range of elevated heavy metals were detected in the groundwater. Given the wide distribution of groundwater samples, it is unlikely that heavy metals within the groundwater are from a point source, and could be naturally elevated.

Groundwater salinity as measured from groundwater samples shows a range from fresh (less than 1,000mg/l) to saline (greater than 5,000mg/l). The maximum observed salinity was in alluvial deposits along Badgerys Creek, south of Western Sydney International (WSI) airport. This location corresponds to known locations of soil salinity. Most of the groundwater samples (85%) are considered saline (greater than 5,000mg/l). In approximately 50% of the samples, the salinity is greater than the maximum that can be used for watering of livestock (about 13,000mg/l).

4.6.3. Groundwater dependent ecosystems

Groundwater dependent ecosystems (GDEs) are defined as *“ecosystems that require access to groundwater to meet all or some of their water requirements to maintain their communities of plants and animals, ecological processes and ecosystem services”* (Department of Planning, Industry and Environment, 2020).

GDEs within 10km of the off-airport study area comprise:

- Cumberland Plain Woodland in the Sydney Basin Bioregion listed as Critically Endangered under the BC Act (PCT 849)
- River-Flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and south-east Corner Bioregions listed as Endangered under the BC Act (PCT 835)
- Shale Gravel Transition Forest in the Sydney Basin Bioregion listed as Endangered under the BC Act (PCT 724)
- Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and south-east Corner Bioregions listed as Endangered under the BC Act (PCT 1800).

GDEs are receptors that rely wholly or partially on groundwater to provide all or some of their water needs. GDEs relevant to this Project can broadly be categorised as:

- Terrestrial GDEs: Ecosystems reliant on the subsurface presence of groundwater (i.e. vegetation that is accessing the water table and/or capillary fringe)
- Aquatic GDEs: Ecosystems reliant on the surface expression of groundwater (i.e. wetlands and baseflow fed watercourses).

Terrestrial GDEs are ecosystems with vegetation that rely on the availability of shallow groundwater, which is within reach of the root zone. Mature, large trees are likely to have the deepest root systems and are the most likely vegetation type in a given ecosystem to access groundwater. Two classifications of terrestrial GDEs are recognised:

- Obligate groundwater dependency – where vegetation (or some vegetation in a wider ecosystem) sources most, or all of its water requirements from groundwater or the capillary fringe.
- Facultative groundwater dependency – where groundwater may be used periodically either only when it is available, or only when it is required.

Subterranean GDEs have not been mapped in the vicinity of the proposed alignment and as such are not considered further. There are also no Ramsar or nationally important wetlands within the study area.

A desktop search of groundwater dependent ecosystems within a 1 km buffer of the project alignment identified several aquatic and terrestrial ecosystems listed as having moderate or high potential for groundwater dependence.

5. Aspects and impacts

Table 5: Soil and water quality aspects and potential impacts

Aspect	Potential impact
• Sediment laden runoff during the establishment of site compounds and excavation works • Material stockpiles • Discharge of sediment laden water from wheel wash facilities.	• Sediment laden/contaminated runoff entering drainage systems and/or directly into receiving waters, causing pollution.
• Storage and use of chemicals near stormwater systems and waterways.	• Potential for soil contamination as a result of a spill • Potential for pollutants to wash into site drainage and into receiving waters.
• Impacts on groundwater levels and groundwater quality.	• Potential reduction in groundwater levels resulting in impacts on other groundwater users • Potential for dewatering of surrounding aquifers during station excavation resulting in impacts on GDEs • Potential for groundwater drawdown induced ground settlement impacts on to properties and infrastructure.
• Impacts on surface water quality.	• Potential for turbid water, metals, sewage and other contaminants to enter drainage systems and result in degradation of aquatic habitat and water quality • Failure to adequately manage runoff and leachate from contaminated areas, including stockpiles, resulting in off-site pollution • Failure to adequately manage ASS stockpiles and treatment resulting in low pH water entering local surface waters.
• Sediment tracking onto public roads from vehicles leaving SBT construction worksites.	• Potential road user safety risks from sediment and gravel on roads • Potential for sediment to be washed into drainage systems and/or directly into receiving waters, causing pollution • Potential for dust to be generated off site through tracking.
• Flooding impacting on SBT worksites.	• Potential for contamination of stormwater by sewerage, fuels and/or chemicals during large rainfall events • Potential for floodwaters to drain into station or shaft excavations, endangering the workforce and damaging equipment.
• Concreting and grouting.	• Potential for water quality impacts on surface water and groundwater resulting from runoff from waste concrete • Potential for spills of excess or waste concrete • Potential for concrete to enter stormwater systems or surface water.
• Construction or modification to stormwater systems.	• Potential for accidental discharge of sediment-laden runoff into stormwater systems.

Aspect	Potential impact
• Unexpected finds of contaminated spoil or groundwater during excavation at the SBT worksites.	• Potential for contaminated soils to be encountered during excavation at the SBT worksites • Potential for encountering contaminated groundwater • Potential for unexpected contamination finds, including asbestos,
• Known contaminated sites and spoil	• Potential for contaminated soils to be encountered during excavation at the SBT worksites • Potential for encountering contaminated groundwater • Potential for unexpected contamination finds, including asbestos • Potential for contaminants to enter drainage systems and result in degradation of aquatic habitat and water quality

6. Monitoring programs

6.1. Surface water quality monitoring program

Under CSSI Condition C13(b) and REMM WQ1, surface water quality must be monitored for the duration of construction, taking into consideration existing water quality monitoring data collected during the delivery of the Western Sydney Airport Bulk Earthworks and for the M12 Road Project.

CPBG will implement SWQMP (Annexure B) to monitor potential impacts on water quality as well as the effectiveness of the mitigation measures to be applied as part of the SBT Works. Water quality management during construction will focus on minimising the risk of polluted, sediment-laden or contaminated water leaving the premises by implementing a comprehensive management and monitoring regime on site.

Pre-construction monitoring will commence immediately once the SWQMP is endorsed by the ER. Where possible, locations that have previously been monitored prior to construction have been used to provide continuity of the dataset and allow for ongoing comparison with the baseline data.

Surface water quality monitoring during the construction phase will occur quarterly and focus on receiving waters downstream of project sites that will potentially receive runoff or discharges. In addition, up to four wet weather monitoring events will be undertaken within a 12-month period. A wet weather event is when at least 25mm of rain is received in the catchment in a 24-hour period. Sampling will be completed when flows are reasonably constant and access is safe.

Physio-chemical parameters will be monitored both upstream and downstream of discharge locations, and heavy metals will be monitored at downstream locations during the pre-construction period.

Weather monitoring will be conducted using rainfall gauges at CPBG compounds, as well as data from the Badgerys Creek weather station, accessed via the Bureau of Meteorology website (http://www.bom.gov.au). The Badgerys Creek weather station is located near the southern extent of the SBT Works alignment, and provides weather updates every half hour.

Surface water quality monitoring in any particular area could be extended if potential impacts attributable to the SBT Works are identified, and work method and management practices will be assessed and revised or adapted if necessary. Potential mitigation measures could include:

- Additional water treatment measures, e.g. replacing filters
- Enhanced use of soil stabilisers and agents to minimise erosion
- Additional sediment control measures
- Revision of CPBG environmental processes and procedures
- Review of design and construction procedures to ensure ongoing minimal impact
- Investigation and advice from subject matter experts
- Additional training and/or awareness for CPBG personnel and subcontractors.

The SWQMP includes site-specific trigger values and nominates management responses and investigations should a trigger be exceeded. If an investigation determines that impacts are attributable to the SBT Works, a trigger response action plan would be developed detailing the appropriate response and actions to be undertaken.

The SWQMP includes reporting requirements in addition to the reporting requirements under the EPL.

6.2. Groundwater monitoring program

Reflecting the requirements of Conditions C13 and C16, CPBG have developed a GWMP to monitor the extent and nature of potential impacts to the groundwater level and quality during the SBT Works (Annexure A). The GWMP will also monitor the effectiveness of mitigation measures and ensure a comprehensive management regime can be implemented to address potential impacts and maintain groundwater quality.

The primary objective of the GWMP is to demonstrate compliance with the SSI 10051 Planning Approval, EPL 21672 and relevant legislation. This objective will be achieved by:

- Establishing monitoring parameters that enable comparison of the actual construction performance against the predicted performance of mitigation measures
- Identifying thresholds for monitoring parameters that if exceeded will trigger the need for management responses
- Scheduling and assignment of monitoring responsibilities.

The GWMP will aim to confirm no adverse impacts on the receiver during construction or to effectively manage any impacts with the implementation of appropriate mitigation measures. Monitoring at any specific location will be subject to the status of the water supply work and agreement with the landowner.

The results of the GWMP will inform detailed hydrogeological and geotechnical models for the SBT Works which will be developed and progressively updated during design and construction (refer to the Hydrogeological Interpretation Report in Section 7.2). The models will identify predicted changes to groundwater levels, including at nearby water supply works and at groundwater dependent ecosystems or other sensitive groundwater receptors.

Where changes to groundwater levels are predicted at nearby water supply works, groundwater dependent ecosystems or other sensitive groundwater receivers, the GWMP will be reviewed and, if necessary, revised.

Where changes to groundwater level are close to the ground surface, dryland salinity monitoring will be implemented to allow for management of any identified impacts.

7. Management strategy

7.1. Overview and lessons learnt

This section details the soil and water management strategy, and is structured as follows:

- Potential for groundwater drawdown and management is addressed in Section 7.2
- Approach to minimising water usage and maximising reuse is addressed in Section 7.3
- Erosion and sediment control planning is set out in Section 7.4
- Water discharge criteria and targets are set out in Section 7.5
- Water treatment plant specifications are set out in 7.5
- The design and management of sediment basins is set out in 7.6
- Management of chemical and refuelling including spill management is addressed in Section 7.7
- Management of sewerage is set out in Section 7.8
- Contamination management is addressed in Section 7.9.

Environment Procedures apply across the SBT Works and document process flow charts, roles and responsibilities and relevant checklists and forms including internal hold points and required environmental permits. They include:

- Contingency Groundwater Monitoring Procedure (SMWSASBT-CPG-SWD-SW000-WA-PRO-000001)
- Erosion and Sediment Control Procedure (SMWSASBT-CPG-SWD-SW000-LD-PRO-000001)
- Water Reuse and Discharge Management Procedure (SMWSASBT-CPG-SWD-SW000-WA-PRO-000003)
- Spill Management Procedure (SMWSASBT-CPG-SWD-SW000-CT-PRO-000002)
- Contamination and Acid Sulfate Soils Management Procedure (SMWSASBT-CPG-SWD-SW000-CT-PRO-000001).

These Environment Procedures are referenced in relevant Sections of this Sub-Plan and provided in Annexure C.

Over many years of successfully delivering tunnelling projects in Sydney there are a number of key lessons learnt which have been incorporated into developing this Sub-Plan including:

- Water Treatment Plants:

  – Better understanding of the characteristics (volume, physical and chemical) of the in-feed wastewater stream anticipated to be encountered throughout the project life-cycle. This will ensure that the design of the water treatment process can adequately treat water to meet the required water quality criteria
  – Implementation of a solids handling component based on the likely characteristics (quantity, physical and chemical) of the water treatment process to enable appropriate classification of the material for reuse/ disposal
  – Use of an experienced local equipment supplier that is readily available to undertake scheduled maintenance and repair work
  – Dedicated and trained operators for day, night and weekend shifts
  – Ability to reintroduce water that does not meet the discharge specification back into the process at different stages to reduce retreatment and resource usage
  – Ensuring that when maintenance or repair work is required that adequate water storage (pre and post treatment) is available
  – Appling management techniques which increase water segregation during rain events detailed in the Controlled Water Overflow Management Strategy (to be developed prior to the commencement of construction).

- Surface Water Management:
  - Engaging a soil conservationist during the worksite layout planning phase to help identify issues and address them accordingly so as to remove the potential for ongoing issues and maintenance during construction
  - Engaging a soil conservationist to review plans for erosion and sediment controls and advising on the proposed strategy for erosion and sediment control and use of new technologies (where appropriate) regarding construction phase soil and water management
  - The worksite drainage design needs to better consider existing clean water drains within active worksites regarding better isolation, with adequate mitigation measures designed and installed in accordance with the Blue Book
  - Clean stormwater i.e. downpipes or up slope runoff to be directed around open work areas where possible to reduce volumes requiring treatment. Sediment basin design to consider safe access to undertake maintenance and the proposed dewatering mechanism to reduce safety and environmental risks associated with dewatering activities.

CPBG will implement these lessons in delivering the SBT Works where relevant.

7.2. Potential groundwater drawdown and management

Groundwater management undertaken as part of the SBT Works will identify the potential for drawdown of surrounding groundwater resources, including GDE's, and monitor potential impacts.

Existing groundwater levels are summarised in Section 4.6.1 and the GWMP (Annexure A). Groundwater levels will change with seasonal variation and rainfall as well as due to construction activity and excavation.

A detailed assessment of existing groundwater levels along the SBT Works alignment using hydrogeological models calibrated to groundwater monitoring data is included in the Hydrogeological Interpretation Report (HIR). This provides an assessment of the baseline groundwater environments observed over the monitoring period and predicts potential drawdown induced by the tunnel, station and shaft excavations for the SBT Works including:

- A summary of the applicable Particular Specification to the groundwater environments at each SBT Works Site including maximum design inflow rates and groundwater control criteria
- A summary of the data sources used to inform the conceptual and numerical models
- An overview of the geological and hydrological setting of the SBT Works
- Discussion of the conceptual hydrogeological models for each SBT Works site, defining aquifer systems based on the local lithology, stratigraphy and structure.

The following provides a brief summary of the groundwater level changes that may occur as a result of construction of the SBT Works:

- Tunnel excavation can cause groundwater to seep into excavations
- The running tunnel is tanked using TBM construction (segmental lining with grout injection immediately following installation) and is predicted to result in a minimal level of groundwater inflow. The period of inflow of any excavation is a short period as the TBM moves along sealing the excavation shortly after excavation.
- Short-term drawdown, 3 to 7 months drained duration, resulting from excavation of the cross-passages prior to completion of the undrained cross passage lining. Average inflow to the cross-passage excavations is estimated at ~5 m^3/day.
- Long-term drawdown resulting from construction of the drained structures (e.g. dives, station boxes and shafts). The expected groundwater changes may result in settlement of the surrounding ground at worksites. Based on previous project experience this settlement is likely to be insignificant due to the relatively thin soil layers present along the majority of the route, combined with the relatively stiff consistency of the soils.

As detailed in the GWMP (Annexure A), additional piezometers will be installed along the alignment (particularly at the station boxes and shafts) to monitor groundwater levels, and to replace some existing instruments located within the proposed excavations which will be removed. Trigger levels have been nominated in the GWMP for piezometers in vicinity of the stations and shafts which are related to the predicted groundwater draw down.

Potential impacts on groundwater dependent ecosystems include changes to groundwater level and flow resulting from groundwater drawdown during excavation works. The EIS includes conservative modelling of these impacts and has identified potential drawdown of between one and four metres, with the zone of greatest predicted change (more than two metres) located within around 230 metres of Orchard Hills Station. The EIS concludes that this maximum change, if it eventuated, would occur at the base of the excavation and moving away from the excavation, the magnitude of the change in groundwater level would reduce.

Based on CPBG's assessment, even with the drained Orchard Hill Station excavation, the extent of the groundwater drawdown is less than what the EIS predicted. The contours in Figure 6 compare the EIS and the SBT Works drawdown extent, where the SBT Works predicted 2m drawdown is around 180m from the excavation. Based on this, CPBG concludes that the drained design included in the Particular Specification will have an impact on the GDE at Orchard Hills consistent with that predicted in the EIS.

The EIS indicates that there are 10 groundwater supply wells within the study area listed on the National Groundwater Information System (NGIS) (BoM, 2019). The majority of the bores are drilled very deep into the Hawksbury Sandstone unit to access the more readily available fresher water more than 2km to the west of St Marys Station box and more than 1km to the southwest from the Aerotropolis Station box. There is no groundwater use near the SBT Works alignment due to the presence of low permeability shale and no impact on groundwater uses is predicted.

Monitoring of groundwater inflows will be undertaken by Project Engineers in accordance with the Contingency Groundwater Monitoring Procedure (SMWSASBT-CPG-SWD-SW000-WA-PRO-000001).

Groundwater inflow cannot be separated from tunnel process water. All water within the tunnels and excavations will be collected in sumps and pumped to the surface. Table 4, which details CPBG's predicted groundwater outflow as a percentage of total discharge, demonstrates that groundwater outflow as a percentage of total water discharge volume is very low. The captured water will be reused on site in preference to offsite discharge (see Section 7.5).

This section will be updated following the completion of the Hydrological Interpretative Report.

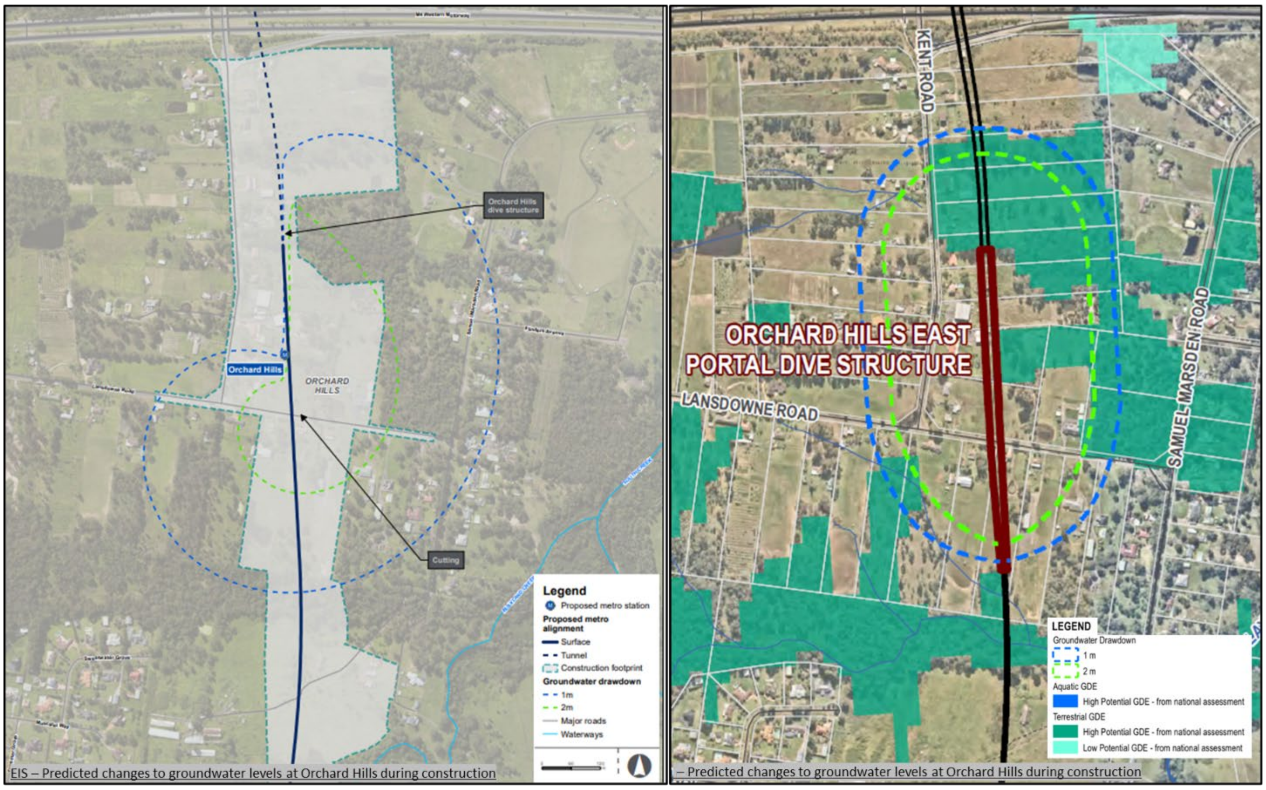

Figure 6: EIS Predicted groundwater drawdown at Orchard Hills (EIS Figure 15-5) compared to CPBG's predicted groundwater drawdown

7.3. Minimising water usage and maximising reuse

Further detail on water reuse is provided in the Water Reuse Strategy (SMWSASBT-CPG-1NL-NL000-WA-RPT-000001).

CPBG will minimise water usage and maximise reuse by:

- Reducing the volume of water required during delivery through use of:
  - Efficient systems, such as misting systems, fog cannons, trigger hoses for washdown and maintaining handstand, and installing acoustic sheds
  - Site amenities fitted with water efficient fixtures.
- Replacing potable water with sustainable non-potable sources, where feasible, by:
  - Reuse of treated water for construction activities
  - Rainwater harvest from acoustic sheds for reuse
  - TBM water recirculation.

CPBG will monitor and measure water consumption during project delivery; refer to the Sustainability Management Plan for details on potable and non-potable water consumption monitoring and reporting.

7.4. Erosion and sediment control

Details on Erosion and Sediment Control Plans are addressed in Section 9.2.

Erosion and sediment controls will be designed, constructed, operated and maintained in accordance with:

- Managing Urban Stormwater – Soils and Construction, Volume 2D, Main Road Construction (DECC, 2008), to be read and used in conjunction with Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition (Landcom, 2004)
- Best Practice Erosion and Sediment Control (IECA 2008)
- Ether industry best practice documents if it can demonstrate the guidance will provide improved or equivalent outcomes for the environment and meet the requirements of Condition L1.1 of EPL 21672.

The Indicative Erosion and Sedimentation Control Strategy for the SBT Works includes the following measures and techniques:

- Clean water approaching the site from external catchments beyond the construction worksites will be managed via clean water drains and diversion berms to minimise run-on into the site. Impacts on adjacent land users will be considered to ensure that localised flooding or excessive run-on does not occur.
- Sediment basins will be designed, installed and managed as per the requirements of the Blue Book and EPL 21672.
- Clearing of vegetation will be minimised and runoff from vegetated areas will be directed off-site.
- Unstable areas will be regularly stabilised with a biodegradable soil polymer or similar proactive ground cover to reduce the amount of sediment mobilised during rainfall.
- Vegetation removed as part of the SBT Works will be reused on site for erosion and/or sediment control purposes where feasible.
- Stormwater flow velocities through work areas will be controlled using temporary berms, checks or other suitable devices and directed to appropriate locations.
- The extent of exposed soils will be minimised, with no-go (exclusion) areas clearly marked on ESCPs, delineated and signposted.
- Rainfall forecasts will be actively monitored and used to trigger inspections and, where required, implementation of additional measures such as the application of soil binder.
- All exposed stockpiles will have sediment controls downslope and be provided with adequate temporary cover if they will remain for more than 10 days. Stockpiles will be situated above the 20-year ARI flood level unless they are short-term (i.e. less than 10 days) and significant rainfall is not forecast.
- At vehicle access points from SBT Worksites, washdown bays, rumble grids and/or stabilised laybacks or other solutions will be constructed, maintained and stabilised to minimise vehicles tracking materials onto public roads as much as is reasonable and feasible
- Vehicle, motorised plant and equipment movements onto or off SBT Worksites will minimise the deposition of any material onto public roads
- Mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer, motorised plant and equipment leaving the SBT Worksite, will be removed to the greatest extent practicable
- Road surfaces subject to any tracking of material by vehicles leaving the SBT Worksites will be cleaned as required to remove soils or debris
- All erosion and sediment controls will be inspected at least weekly, before a site closure of more than two days, and after rainfall exceeding 10 mm in 24 hours if safe to do so. Maintenance will be carried out as required prior to the next forecast rainfall event.
- Concrete washout will be confined to designated concrete washout bays or using a Concrete Waste Separation Unit (CWSU), which allows for recycling of concrete waste and treatment of wastewater.
- Sediment collected from sediment basins or other traps will be transported to nominated stockpile sites.

- Dust generation will be minimised through the use of water carts, sprinklers, soil stabilisers, reduced traffic speeds and application of temporary ground covers.
- Any discharge to waterways will include appropriate scour protection/dissipation.
- Drainage feature crossings (permanent and temporary watercourse crossings and stream diversions) and drainage swales and depressions will be carried out in accordance with relevant guidelines and designed by a suitably qualified and experienced person.

7.5. WTP Discharge criteria, targets and testing

The discharge of treated wastewater from construction water treatment plants (WTPs) has the potential to impact on receiving environment water quality if not adequately managed. Groundwater management will be required during station box and tunnel excavation and discharge will be required from each of the SBT worksites during construction.

Groundwater inflow into tunnels cannot be separated from tunnel process water. All water within the tunnels and excavations will be collected in sumps and pumped to the surface.

Reuse of wastewater will be maximised, but the volume of tunnel process water generated means discharge of large volumes of treated water is required.

The CSSI must be designed and constructed so as to maintain the NSW Water Quality Objectives (NSW WQO) where they are being achieved as at the date of this approval, and contribute towards achievement of the NSW WQO over time where they are not being achieved as at the date of this approval, unless an EPL in force in respect of the CSSI contains different requirements in relation to the NSW WQO, in which case those requirements must be complied with. To this end, water treatment plants will be designed to ensure that wastewater is treated to a level that is compliant with the ANZECC/ ARMCANZ (2000), ANZG (2018) and draft ANZG (2020) default guidelines for 95 per cent species protection and 99 per cent species protection level for toxicants that bioaccumulate unless other discharge criteria are agreed with relevant authorities.

A Discharge Impact Assessment has been completed for the Project and has recommended the site-specific discharge criteria in Table 6. The DIA process is discussed further in Section 9.1.

Table 6: Predicted groundwater inflows, discharge volumes and locations

Parameter	Unit of Measure	50th Percentile Concentration Limit	90th Percentile Concentration Limit	100th Percentile Concentration Limit
pH [2]	pH Units	-	-	6.5 – 8.5
Electrical Conductivity [2]	µs/cm	-	-	125 – 2,200
Turbidity [2]	NTU	-	-	6.0 - 50.0
Oil and Grease	-	-	-	No Visible
Total Phosphorous	µg/L	50	100	-
Total Nitrogen	µg/L	500	1,200	-
Total Ammonia	µg/L	900	1,430	2,300
Aluminium	µg/L	55	80	150
Arsenic (As V) [1]	µg/L	13	42	140
Arsenic (As III) [1]	µg/L	24	94	360
Cadmium [1]	µg/L	0.2	0.4	0.8

Parameter	Unit of Measure	50th Percentile Concentration Limit	90th Percentile Concentration Limit	100th Percentile Concentration Limit
Cobalt [1]	µg/L	1.4	-	4.2
Chromium (Cr VI) [1]	µg/L	1.0	6.0	40
Chromium (Cr III) [1]	µg/L	3.3	7.7	27
Copper [1]	µg/L	1.4	1.8	2.5
Iron [1]	µg/L	300	-	900
Lead [1]	µg/L	3.4	5.6	9.4
Manganese [1]	µg/L	1,900	2,500	3,600
Mercury [1 B]	µg/L	0.06	0.6	1.9
Nickel [1]	µg/L	11	13	17
Vanadium	µg/L	6	-	18
Zinc [1]	µg/L	8	15	31
Endosulfan (µg/L) [B]	µg/L	0.03	0.2	0.6
Methoxychlor (µg/L)	µg/L	0.005	-	0.015
TPH C10-C36 Fraction	µg/L	<100	<100	<100
TPH C6-C9 Fraction	µg/L	<100	<100	<100

7.6. Sediment basins

Where feasible, on-site detention of stormwater would be introduced where stormwater runoff rates are increased. The design and construction of the sediment basins will be undertaken in accordance with the Blue Book Volumes 1 and 2D (Landcom, 2004 and DECC, 2008). Prior to construction, the design calculations and locations will be determined by the Project Soil Conservationist.

Sediment basin locations and sizes will be further refined during detailed design. The sediment basins have been designed to retain a 5-day 85th percentile rainfall event prior to overtopping, which equates to a rainfall depth of 27.6mm. This is the rainfall depth after which it is commonly expected that other erosion and sediment controls will be overtopped.

The design storage capacity of each sediment basin will be reinstated within the design management period following the cessation of a rainfall event that causes runoff to occur on or from the SBT Worksite. Records of the available water and sediment storage capacities in each sediment basin will be maintained by the Environmental Coordinator and provided to the EPA on request.

As part of the commissioning phase, a Water Detention and Settlement Basins Checklist will be developed and completed. An administrative process to update discharge points will be agreed with the EPA to enable timely processing.

Where there is insufficient space for the provision of sediment basins, the upgrade of downstream infrastructure will be implemented where feasible and reasonable. At all locations where stormwater is discharged, water quality measures such as gross pollutant traps, bio-retention swales and Water Sensitive Urban Design features will be investigated and implemented where feasible and reasonable.

7.6.1. Sediment basin discharge monitoring

All water will be tested (and treated if required) prior to discharge from the site in order to determine compliance with the appropriate approvals and EPL 21672. Except as may be expressly provided by EPL 21672, CPBG will comply with section 120 of the POEO Act 1997.

No water will be discharged from the site without written approval of the Environment Manager (or delegate). A dewatering and discharge permit must be issued and signed by all relevant parties prior to discharge and constitutes a hold point.

As per Condition P1.1 of EPL 21672, discharge of water is permitted from clearly identified and accessible points detailed in Table 7. Discharge and monitoring points must be approved by the EPA in accordance with the process detailed in Condition P1.2 of EPL 21672.

Table 7: EPA discharge and monitoring points

EPA ID No.	Type	Location description
1	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	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	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	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	The outlet(s) of the sediment basin(s) on the Aerotropolis site discharging to Thompson Creek referred to in Condition P1.2

For each discharge and monitoring point detailed in Table 7, the concentration of a pollutant discharged must not exceed the concentration limits specified in Table 8 unless:

- The discharge occurs solely as a result of rainfall measured at the premises exceeding the design rainfall depth value for the corresponding discharge point; and
- The sediment basins and other erosion and sediment controls corresponding to the discharge point(s) have been designed, constructed, operated and maintained in accordance with Condition O4.2 of EPL 21672.

Table 8: Water concentration limits

Pollutant	Units	100 percentile concentration limit	Sampling method*	Frequency
Oil and grease	Visible	Not visible	Visual inspection	• Less than 24 hours prior to a controlled discharge and daily for any continued controlled discharge, when it is safe to do so • 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.
pH	pH	6.5 – 8.5	Probe	
Turbidity	Nephelometric turbidity units	50	Probe	

* Monitoring must be done in accordance with the EPA Approved Methods Publication.

7.6.2. Sediment basin monthly monitoring

Reflecting the requirements of EPL 21672 (Table 9), monthly surface water monitoring must be undertaken at discharge point 1 (the outlet(s) of the sediment basin(s) on the Orchard Hills site discharging to South Creek) from 30 May 2022 to 30 November 2022.

The results of the surface water monitoring will be submitted to the EPA no more than two weeks after each monthly monitoring event has occurred for a minimum of 6 months from the date of issue of this licence

Table 9: EPA discharge and monitoring points

Category	Measured	Parameters
Physio-chemical parameters	In-field using a calibrated multi parameter probe	• Temperature (°C) • Dissolved Oxygen (% saturation) • Electrical Conductivity (µS/cm) • Reduction-Oxidation Potential (Redox)(mV) • pH • Total suspended solids (TSS) • Turbidity (NTU) • Visible oil and grease
Metals	Laboratory testing	• Aluminium • Arsenic (III and V) • Cadmium • Cobalt • Chromium (III and VI) • Copper • Lead • Manganese • Mercury • Nickel • Vanadium

Category	Measured	Parameters
		• Zinc
Organochlorine pesticides	Laboratory testing	• Endosulphan • Methoxychlor
Total Petroleum Hydrocarbons	Laboratory testing	• TPH C10-C36 Fraction • TPH C6-C9 Fraction

7.7. Chemicals, refuelling and spill management

Chemicals, hazardous substances and dangerous goods will be stored and used on site in accordance with existing procedures and the following protocols:

- Hazardous substances will be stored on site in lockable containers, in their original receptacles
- All chemicals and fuels will be clearly labelled and will have Safety Data Sheets affixed or available nearby
- All chemical storage facilities will be designed and constructed in accordance with:

– All relevant Australian Standards
– For liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund
– Storing and Handling Liquids: Environmental Protection - Participants Manual
– Environmental Compliance Report: Liquid Chemical Storage, Handling and Spill Management - Part B Review of Best Practice and Regulation

- Storage locations for non-liquids must be identified that are away from stormwater drains and easily accessible for maintenance and spill clean-up in the event of a rupture
- Bunding maintenance must be undertaken to ensure capacity is maintained.

Chemicals will be stored and handled in accordance with relevant Australian Standards, namely:

- AS 1940-2004 The storage and handling of flammable and combustible liquids
- AS/NZS 4452:1997 The storage and handling of toxic substances
- AS/NZS 5026:2012 The storage and handling of Class 4 dangerous goods
- AS/NZS 1547:2012 On-site domestic wastewater management.

Spill kits will be provided and regularly maintained at high-risk areas, including workshops, fuel storage areas, batch plants and WTPs.

7.8. Management of sewage

Sewage and grey water from all site facilities except St Marys will be directed to on-site storage tanks where it will be regularly removed by a licensed truck for transport and disposal at a licensed facility. The expected volumes of wastewater to be generated will be calculated based on the size of the workforce and the tank storage capacity, and frequency of truck movements calculated accordingly to prevent overflow. St Marys will connect into the local sewerage network for site sewage discharge.

7.9. Contamination, salinity and acid sulfate soils

7.9.1. Contamination

The SBT Works involve the excavation and dewatering of stations, dives and services facilities shafts and tunnels along the alignment. The stratigraphy of the excavations along the SBT Works alignment generally consists of fill overlying residual soil and alluvium, with rock underneath.

The area on and around the SBT Works footprint has a diverse range of current and former land uses, including industrial, commercial, residential and agricultural land uses. Industrial uses include a range of potentially contaminating activities, such as dry cleaning, bus depots, railway activities, mixed industrial and nearby service station and landfilling at Claremont Meadows. In general (depending on the presence or absence of local contamination sources), fill soil is expected to contain low level contamination.

Before commencement of any construction that would result in the disturbance of medium to high risk contaminated sites as identified in the EIS or Submissions Report (referred to as an Area of Environmental Concern or AEC), a Detailed Site Investigation (DSI) will be prepared to determine the full nature and extent of the contamination. Reflecting the outcomes of the sampling and analytical testing, a medium or high-risk area of environmental concern may be reassessed as low risk. As detailed in REMM SC1, this would typically occur where there is minor, isolated contamination that can be readily remediated through standard construction practices such as excavation and off-site disposal.

To inform the risk rating, a Technical Memo will be prepared by a certified consultant on completion of sampling and analytical testing. The intent of the memo is to assess the results of the DSI field work to determine if an area of environmental concern (or a portion of the area) can be reassessed as low risk based on the level and characteristics of identified contamination. The Technical Memo will be reviewed by the Site Auditor prior to submission to Sydney Metro for information. Works will be undertaken in accordance with the mitigation measures identified in the Technical Memo, and the results of waste classification incorporated into the DSI Report.

The DSI Reports and the subsequent report(s), will be prepared, or reviewed and approved, by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme. The DSI Reports will be undertaken in accordance with:

- Guidelines made or approved under section 105 of Contaminated Land Management Act 1997 (CLM Act) (NSW)
- Sampling, Analysis and Quality Plans (SAQPs) which will facilitate the establishment of contamination management requirements before excavation commences. Reflecting the requirements of the Deed, in-situ classification of solid waste will be undertaken at sampling densities not less than that specified within the NEMP (2013) and the Industrial Waste Resources Guidelines, Sampling and Analysis: Soil Sampling (EPA Victoria 2010), except for VENM and ENM which are to be classified in accordance with the requirements of the POEO Act.

Should remediation be required to make land suitable for the final intended land use, a Remedial Action Plan (RAP) will be prepared, or reviewed and approved, by consultants certified under either the CEnvP(SC) or the CPSS CSAM scheme. The RAP will be prepared in accordance with relevant guidelines made or approved by the EPA under section 105 of the CLM Act and will include measures to remediate the contamination to ensure the site will be suitable for the proposed use when the RAP is implemented. Reflecting the requirements of clause 12.20 of the Deed, each RAP will include:

- Objectives of the RAP and the extent of the site to which it applies

- Define what will constitute practical completion of remediation
- Construction methodology
- Describe the nature and extent of contamination based on the DSI
- Include details of any remediation completed during performance of any preliminary works
- Review of the remediation options and rationale for the selected remediation strategy(s), including appropriateness, practicality, durability, sustainability, cost effectiveness, environmental impact and compliance with the Deed
- Stockpile management plan to prevent cross contamination
- Detailed risk assessment to determine and describe the requirements for remediation of contamination (including soil, groundwater, ground gas and vapour), including migration of contamination via groundwater, ground gas and odour into the areas of excavation or disturbance
- Consider and plan to mitigate the migration of contamination from the SBT worksite
- Site management requirements to protect workers, adjacent site users and the environment
- Waste classification of soils (as defined by in situ waste classification completed as part of the detailed site investigations) to be removed from the site to a licensed waste facility or under an EPA-approved resource recovery order/exemption
- Requirements for record-keeping, including vehicle movements, disposal dockets and receival sites
- An unexpected finds protocol for unidentified contamination, e.g. underground storage tanks, asbestos
- Sampling, assessment and waste classification of soils from ancillary excavations outside of the bulk excavation that need to be disposed of off site
- Validation plan, including sampling frequency and methods, analytical suite, quality assurance and control, and reporting requirements.

In addition to the above requirements, each RAP will contain sufficient detail and justification to enable determination of any agreed remediation scope, including:

- A classification and excavation map that accurately identifies the location of any samples taken and mapping (lateral and vertical) of remaining solid waste and its respective waste classification
- A detailed excavation plan and register that is consistent with the classification and excavation map describing the quantities in tonnes and cubic metres of each material proposed to be excavated and to be reused and/or disposed offsite
- Details of any other elements of remediation that are required to mitigate risks to the construction, operation and maintenance of Sydney Metro Wester Sydney Airport.

Before commencing remediation, the DSI and RAP will be submitted to Sydney Metro in accordance with the requirements of the Deed. A Section B Site Audit Statement(s) will also be prepared by an NSW EPA-accredited Site Auditor that certifies that the RAP(s) is/are appropriate and that the site can be made suitable for the proposed use. In the event that RAP proposes the retention of contaminated material onsite, requirements for a Long Term Environmental Management Plan will be detailed in the RAP.

The RAP(s) will be implemented and any changes to the RAP(s) will be approved in writing by the NSW EPA-accredited Site Auditor. Where possible, sustainable remediation principles will be adopted and the requirement for long-term monitoring following remediation will be minimised.

On completion of remediation, Validation Report(s) will be prepared in accordance with Consultants Reporting on Contaminated Land: Contaminated Land Guidelines (EPA, 2020) and relevant guidelines made or approved under section 105 of the CLM Act.

A Section A1 or Section A2 Site Audit Statement (accompanied by an Environmental Management Plan) and its accompanying Site Audit Report, which state that the contaminated land disturbed by the work has been made suitable for the intended land use, will be submitted to the Planning Secretary and the relevant council(s) after remediation and before the commencement of operation of the CSSI.

The EPA contaminated land audit process, which applies to contamination investigation, remediation, validation and management, will be combined with a review by Sydney Metro, the Certified Contaminated Land Consultant and the ER. This process will ensure that these stakeholders are fully informed of the scope of investigations, progress of testing, and findings.

A copy of DSI Report(s), RAP(s), Validation Report(s), Site Audit Report(s) and Site Audit Statement(s) will be submitted to the Planning Secretary and the relevant council(s) for information.

7.9.2. Salinity

Prior to ground disturbance in high probability salinity areas (Figure 3), testing would be carried out to determine the presence of saline soils. If salinity is encountered, excavated soils would not be reused or would be managed in accordance with Book 4 Dryland Salinity: Productive Use of Saline Land and Water (NSW DECC 2008), and in consultation with the Project Soil Conservationist (see 7.2.1). Erosion controls would be implemented in accordance with Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom, 2004).

7.9.3. Acid sulfate soils

As outlined in Section 4.4, there is a low probability of ASS being encountered in the off-airport SBT Works area. Prior to ground disturbance in areas of PASS, relevant mapping will be reviewed and testing will be undertaken to determine the actual presence of acid sulfate soils. If acid sulfate soils are encountered, management will occur in accordance with the Acid Sulfate Soil Manual (Acid Sulfate Soil Management Advisory Committee, 1998). Possible management strategies include:

- Modifying location of temporary facilities to avoid the area of known PASS
- Delineation and removal to a suitably licenced facility
- Preparation and implementation of an on-site treatment procedure to neutralise the PASS, including adequate controls to mitigate potential environmental impacts

The management of any PASS will include appropriate erosion and sediment controls to minimise the potential for pollution of waters.

7.9.4. Unexpected Finds Protocol

An unexpected find is defined as potential contaminated land or asbestos that was not previously identified in the EIS, DSI or RAP. Unexpected finds that may be encountered during the SBT Works are summarised in Table 10.

Table 10: Potential unexpected finds

Unexpected Find	Description
Fuels or oils	Fuel or oil contamination may be identified by odour, coloured sheen or staining/discolouration of soils. The ‘oily’ odour can vary in strength from weak (just detectable) to very strong.
Buried waste	Buried waste includes construction and demolition materials (e.g. wood, plastic, metal, bricks, etc) as well as landfill material (domestic putrescible waste).

Unexpected Find	Description
Buried Asbestos Containing Material (ACM), asbestos fines/friable asbestos	Cement-bound ACM may be present in building waste or conduits. Friable asbestos is more commonly associated with lagging and insulation. Laboratory analysis is typically required to identify asbestos fines and fibres.
Storage tanks or conduits	Underground storage tanks and former pipelines are typically metal, concrete or plastic. Storage tanks may be full, partially full or decommissioned. Indications of contamination (staining or odour) may be present in the surrounding soils.
Ash or slag	Ash material is typically light weight, grey and white sand. Slag varies in consistency (loose or cemented) and colour (grey, blue, green).
Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)	Group of over 4000 chemicals Manufactured chemicals that are widely used to make fire-fighting foam, stain and water protection, paper coating, metal plating, photographic materials, aviation hydraulic fluid, cosmetics and sunscreen, and medical devices.

Where unexpected contamination or asbestos is identified or suspected, the Unexpected Finds Protocol will be implemented as detailed in Table 11.

Table 11: Unexpected finds protocol

Action	Description
Unexpected contamination or ACM	• **Hold Point:** If observations indicate the presence of potential contamination, stop all work in the immediate area. Notify the Site Supervisor, Environmental Coordinator and Health and Safety Advisor. Make the area safe and contact a certified contaminated land consultant. • Assess the potential risk to worker health and the surrounding environment; evacuate or contact emergency services if required
Health, safety and environmental controls	• Site Supervisor to establish an exclusion zone around the impacted area with para-webbing and appropriate signage • Refer to the Work Health and Safety Plan for Personal Protective Equipment requirements • Use water sprays to dampen ACM unexpected finds • Cover potential ACM with weighted plastic sheeting or geofabric • Divert clean water from the area of excavation in accordance with this Sub-plan
Notification	• Site Supervisor to notify the Environment Manager who will: ◦ Immediately notify Sydney Metro Principal's Representative in writing ◦ Within 10 business days after becoming aware of the unexpected find, provide a notice to the Sydney Metro Principal's Representative detailing the type, location, nature and extent of the contamination, detailed particulars on claim entitlements, proposed remediation activities and estimate of costs likely to be incurred ◦ Notify the ER ◦ Notify the Site Auditor (for audited sites) ◦ Notify the EPA where required in accordance with the 'Guidelines on the Duty to Report Contamination under the CLM Act 1997' (Office of Environment and Heritage, 2009) ◦ Log the find on Synergy, including photographs and location information

Action	Description
Assessment	• Environment Manager to engage a Contaminated Land Consultant to: ◦ Conduct a preliminary assessment of the nature of the contamination and the immediate management controls ◦ Collect samples for chemical or asbestos analysis by a NATA accredited laboratory ◦ Assess the results against applicable land use or waste classification criteria in accordance with statutory guidelines made or endorsed by the NSW Environment Protection Authority ◦ Manage the contamination in accordance with statutory guidelines made or endorsed by the NSW Environment Protection Authority
Management and reporting	• Environment Manager to implement necessary management and/or mitigation actions to minimise risk to human health and the environment, and ensure the site will be suitable for the proposed use • If ACM is confirmed, the Health and Safety Advisor is to: ◦ Install warning signs on the barricades to prevent unauthorised entry to the site ◦ Engage a SafeWork Licenced Asbestos Removalist to remove and dispose of the ACM to an appropriately licenced facility ◦ Engage an Occupational Hygienist to conduct air monitoring as required and issue an Asbestos Clearance Certificate on completion of remediation works ◦ Upload air monitoring results and Asbestos Clearance Certificate to Synergy ◦ Provide briefings to workers during Toolbox meetings or Pre-Start meetings
Recommence works	• Recommence works at the direction of the Environment Manager when the following criteria have been satisfied: ◦ Site is safe to access ◦ Management and/or mitigation actions have been implemented ◦ Site has been validated as suitable for the proposed use

7.10. Flood Management

The SBT Works will be designed and constructed with the objective of not exceeding the flood impacts presented in the EIS or the flood impact criteria in Table 5 of the SSI 10051 Planning Approval, whichever is greater (Condition 15). This objective is applicable to within and in the vicinity of the approved project boundary for all flood events up to and including the one per cent Annual Exceedance Probability (AEP) flood event.

Measures identified in the EIS and Submissions Report to limit flooding impacts or measures that achieve the same outcome will be incorporated into the detailed design of the SBT Works. This will include the development of flood compatible design for the permanent spoil placement areas (off-airport) to ensure compliance with applicable land use criteria.

Updated modelling that incorporates these measures and is calibrated and validated with consideration of the results of the Wianamatta-South Creek Catchment Flood Assessment prepared by Infrastructure NSW as part of Stage 2 of the South Creek Sector Review will be prepared by a suitably qualified flood consultant. The modelling will identify changes in post-development flood behaviour including cumulative flood impacts associated with WSA and the M12, where this information is available, prior to detailed design being finalised.

Where flooding characteristics exceed the levels identified in Condition E15, CPBG will consult with the NSW State Emergency Service (SES) and relevant council(s) regarding the management of any continuous and residual flood risk from rarer flood events larger than the 1 per cent AEP and up to the probable maximum flood.

Sydney Metro will undertake consultation with affected landowners for properties adversely flood affected as a result of the SBT Works. In the event that Sydney Metro and the affected landowner cannot agree on the measures to mitigate the impact as described in Condition E15, Sydney Metro will engage a suitably qualified and experienced independent person to advise and assist in determining the impact and relevant mitigation measures.

Flood information including flood reports, models and geographic information system outputs will be provided to the DPE Place, Design and Public Spaces Division (PDPS), relevant council(s), DPE Environment and Heritage, and the SES (Nominated Parties) in order to assist in preparing relevant documents and to reflect changes in flood behaviour as a result of the SBT Works. Each of the Nominated Parties will be notified in writing that the information is available no later than one month following the completion of the SBT Works.

Information requested by the Nominated Parties will be provided no later than six months following the completion of SBT Works or within another timeframe agreed with the relevant Nominated Party. The project flood models and data will be uploaded to the NSW Flood Data Portal and access will be provided to the Nominated Parties no later than one month following the completion of the SBT Works.

7.11. Groundwater modelling

CPBG will submit a revised Groundwater Modelling Report to the Planning Secretary for information before bulk excavation at the relevant construction location. The Groundwater Modelling Report will include:

- For each construction site where excavation will be undertaken, cumulative (additive) impacts from nearby developments, parallel transport projects and nearby excavation associated with the SBT Works
- Predicted incidental groundwater take (dewatering) including cumulative project effects
- Potential impacts of the SBT Works or detail and demonstrate why the SBT Works will not have lasting impacts to the groundwater system, ongoing groundwater incidental take and groundwater level drawdown effects
- Actions required to minimise the risk of inflows (including in the event the SBT Works are delayed or do not progress) and a strategy for accounting for any water taken beyond the life of the operation of the SBT Works
- Saltwater intrusion modelling analysis, from saline groundwater in shale, into metro station sites
- A schematic of the conceptual hydrogeological model.

8. People and collaboration

8.1. Our team

The roles and responsibilities of key CPBG personnel with respect to soil, water and groundwater management are detailed in Table 12.

Table 12: Key roles, authority and responsibility

Role	Authority and responsibility
Construction Director	• Manage the delivery of the SBT Works, including overseeing planning approval and environmental management • Hold authority to direct personnel and/or subcontractors to carry out actions to avoid or minimise unintended environmental impacts • Act as the Contractor's Representative.
Approvals, Environment & Sustainability Manager (Environment Manager)	• Prepare and implement this Sub-plan • Oversee soil, water and groundwater monitoring, inspections and auditing • Hold authority to direct personnel and/or subcontractors to carry out actions to avoid or minimise unintended environmental impacts.
Commercial Manager	• Ensure that relevant soil, water and groundwater management requirements are considered in the procurement of materials and services.
Design Manager	• Ensure relevant soil, water and groundwater requirements are addressed in design development.
Construction Managers and delegates	• Manage the delivery of the construction process in relation to soil, water and groundwater management for their work activity in conjunction with the Environment Manager and Environmental Coordinators • Ensure compliance with this Sub-Plan and associated procedures.
Sustainability Manager	• Track and report soil and water elements against sustainability targets.
Environmental Coordinators	• Manage the on-ground application of soil and water management measures during construction (e.g. erosion and sediment control, water treatment and monitoring) • Monitor and report on soil and water management during construction.
Superintendents	• Work with the Environment Manager to ensure construction is carried out in compliance with environmental controls • Hold authority to direct personnel and/or subcontractors to carry out actions to avoid or minimise unintended environmental impacts.
Project Managers, Project Engineers, Site Supervisors	• Work with the Environment Manager to implement and monitor on-site environmental management and compliance measures across all sites • Undertake site inspections.

8.2. Specialist consultants

8.2.1. Soil conservationist

Strategic Environmental and Engineering Consulting (SEEC) has been engaged to provide expert advice which has been incorporated into this plan. SEEC will continue to provide specialist advice and services in the development and implementation of this Sub-Plan to ensure that impacts can be avoided, minimised or appropriately mitigated, including:

- Providing input into the selection and design of erosion and sediment controls
- Reviewing plans for erosion and sediment controls and advising on the proposed strategy for erosion and sediment control and use of new technologies (where appropriate) regarding construction phase soil and water management
- Conducting regular site inspections with environmental and construction personnel to review performance, recommend improvements and advise on potential enhancements
- Providing training to all key personnel regarding erosion and sediment control. This will include legislative requirements, the application of best practice (i.e. Blue Book Volumes 1 and 2), correct use and maintenance, and installation of erosion and sediment control techniques.

8.2.2. Contamination specialist

Coffey, a consultancy specialising in the fields of geotechnical, environmental and groundwater engineering, has been engaged to undertake Phase 2 contamination investigations, develop RAPs, conduct validation assessments, and provide advice on contamination management. Coffey will also be responsible for the Hydrogeological Interpretive Report and providing assistance with groundwater contamination aspects.

8.2.3. EPA accredited auditor

CPBG has engaged the services of Ramboll Environ, which employs a number of EPA accredited site auditors to provide Interim Audit Advice and Site Audit Statements, where triggered.

9. Systems and tools

9.1. Discharge Impact Assessment

Building on the water quality monitoring undertaken by Sydney Metro (see Section 6.1), CPBG has prepared a Discharge Impact Assessment (Wastewater Pollution Impact Assessment). The purpose of this assessment was to identify:

- The existing water quality in each receiving environment
- The water quality objectives for each catchment
- Whether the water quality objectives are being met in each catchment
- The predicted impact of water discharged from sediment basins and from the project WTPs

Recommended discharge limits from sediment basins and from the WTPs are contained in the Discharge Impact Assessment and will be incorporated into the EPL.

9.2. Detailed Erosion and Sedimentation Control Plans

Site-specific Erosion and Sediment Control Plans (ESCPs) will be progressively developed for each of the SBT worksites in accordance with Section 7.4. Initial ESCPs will be developed with input from the Project Soil Conservationist and will be regularly updated by the Soil Conservationist or CPBG environmental personnel following changes in the site layout or phase of works. All ESCPs will require sign-off by the Environment Manager and Site Supervisor prior to implementation. The Soil Conservationist will conduct regular reviews of all ESCPs developed for the SBT Works, and site inspections where necessary, to ensure they meet best practice (i.e. the Blue Book).

ESCPs will be posted on site noticeboards and requirements regularly communicated to the relevant workforce through toolbox training.

9.3. Training

Environmental training requirements for key personnel and workforce positions will be identified through a Training Needs Analysis and implemented throughout the SBT Works. Key elements of the training program will include:

- Site induction for all new starters addressing legal requirements, site-specific environmental risks and incident reporting
- Toolbox talks to reinforce key environmental risks for the stage of the works and to communicate incidents and lessons learnt from other sites or projects. Toolbox talks will be used to communicate daily weather forecasts that may result in an increased ERSED risk
- Aspect-specific training to be provided to key work teams which include topics such as erosion and sediment control, water treatment and legal requirements. This will include legislative requirements, the application of best practice (i.e. Blue Book Volumes 1 and 2), correct use and maintenance, and installation of erosion and sediment control techniques.

External training providers will be used where required to ensure a high level of training.

9.4. Reporting, review, auditing and continual improvement

CPBG will regularly review the SBT Works to ensure compliance with project requirements. A regular inspection program for soil and water will be conducted as follows:

- Details of daily inspections undertaken by Site Supervisors will be logged in their respective site diaries or online systems
- Routine weekly inspections are to be conducted by Environmental Coordinators to monitor erosion and sediment controls in active worksites. Weekly inspections will be documented in the CPBG electronic system

- Site inspections of active SBT worksites will be carried out by the ER
- Environmental inspection will be completed prior to and following significant rainfall events (i.e. >10 mm/24 hours) by the Environmental Coordinator and/or Superintendent/Site Supervisor
- Inspections by the Soil Conservationist will be conducted to review site progress and compliance with ESCPs.

CPBG will develop and implement an audit program which will address both internal and external audits, including compliance with this Sub-plan. Additional details on the audit program are provided in Section 7.13.1 of the CEMP.

CPBG will seek to continuously improve performance with regards to soil and water management. This is achieved through the use of new and innovative methods and technologies for erosion and sediment control (as driven by the Infrastructure Sustainability Council rating process) and by implementing lessons learnt from other CPB Contractors and Ghella projects.

9.5. Records

The following compliance records will be retained by CPBG on SharePoint for a minimum of seven years:

- Copies of current ESCPs for all active construction sites
- Records of soil and water inspections undertaken
- Records of testing of any water prior to discharge
- Dewatering and discharge permits.

Part B: Implementation Systems and Tools

Part B of this Sub-Plan explains how the soil and water impacts of the SBT Works will be minimised. All relevant mitigation measures from the CEMF and REMMs identified in Section 7 of the Submissions Report, are addressed in this section of the Sub-Plan. Compliance with all elements of these systems and tools is required at all times to minimise the likelihood of causing unauthorised environmental harm and maximise the uptake of opportunities to reduce environmental impact.

Part B contains the following:

- **Environmental Elements and Expectations**: These describe what is required of the SBT Works in order to implement the objectives of CPBG's Environment and Sustainability Policy:
  - **Element** – Key aspects for managing this function in delivering the SBT Works
  - **Intent** – A one-line statement describing the overall purpose of the Element
  - **Expectation** – The outcomes achieved as part of each Element.
- **Requirements**: These are the specific actions performed in order to demonstrate compliance with the Elements and Expectations.
- **Responsibility and Key Contributor**: This information is included to ensure absolute clarity as to those people responsible for achieving compliance with the stated Expectation, as well as those that will need to assist/contribute to achieving compliance.
- **Deliverables**: This column of the table lists the tangible outcomes to be produced in order to demonstrate compliance with the environmental Elements and Expectations.

Element 1: Training

All staff, employees and subcontractors will actively drive continuous improvement in the environmental performance of the SBT Works

Expectations	How will JHCPBG meet the Expectation?	Responsible Key Contributor	Deliverables
1.1. All personnel have completed an induction containing relevant environmental information before they are authorised to work on the SBT Works	All personnel working on the SBT Works will undertake a site induction, which will provide initial training on various environmental aspects, including soil and water management. It will cover: • Protecting the site from erosion and sedimentation • Potential soil and water Impacts to the environment and surrounding community • Mitigation measures • Hold Points (inspection of erosion and sedimentation controls)	**Human Resources Manager** Environment and Sustainability Manager Environment Coordinators	Induction presentation Induction records Hold point register
1.2. Toolbox talks are used to reinforce key management requirements and lessons learnt	Tool boxing will be undertaken to reinforce and reiterate information from inductions and where procedures are amended or new procedures are introduced or to communicate lessons learnt/incidents from other Projects. In particular, toolboxes will be undertaken periodically on upcoming inclement weather, erosion and sedimentation controls, fuel and chemical management and other topical soil and water issues.	**Environment and Sustainability Manager** Site Supervisor Environment Coordinators	Toolbox records Toolbox topic schedule

Element 2: Monitoring and reporting

All staff, employees and subcontractors will actively drive complaint environmental performance of the SBT Works

Expectations	How will CPBG meet the Expectation?	Responsible Key Contributor	Deliverables
1.3. Worksites are regularly inspected to ensure the adequacy of controls	Site Supervisor to undertake daily inspections of worksite to ensure management of soil and water quality controls and will undertake adaptive management where required. Weekly inspections of soil and water quality controls will be undertaken as part of Joint Environment Inspections. Pre-and post-rainfall inspections to be undertaken to ensure adequacy of site controls. A regular inspection program for soil and water quality monitoring will be conducted as follows: • Details of daily inspections undertaken by the Site Supervisor will be recorded • Routine weekly inspections are to be conducted to monitor soil and water quality mitigation measures in active worksites. Weekly inspections will be documented and summarised in monthly reports. • ER inspections will include review of implementation of erosion and sedimentation management and mitigation measures • Effectiveness of soil and water quality controls and chemical storage areas will be monitored and adapted progressively.	**Environment and Sustainability Manager** Superintendents Site Supervisors	Site Diary entries Environment Inspection Reports Monthly reports
1.4. Monitoring is performed to establish baseline data and ensure compliance is maintained	CPBG will monitor trends in environmental data including: • Pre-construction water quality monitoring / testing for baseline data • Effectiveness of site controls	**Environment and Sustainability Manager** Environment Coordinators	Visual air quality records Inspection Reports

Expectations	How will CPBG meet the Expectation?	Responsible Key Contributor	Deliverables
	• Meteorological conditions • Identification of near-by, non-project related sedimentation sources		
1.5. Monitoring records are maintained	Compliance records will be retained by CPBG and will include: • Environmental inspection reports and register • Stop work register • Erosion and sedimentation control plan register • Sediment basin capacity The monthly environmental report will include a summary erosion and sedimentation mitigation effectiveness and the specific controls which were implemented for each work zone. Water sample records must include the date and time that the sample was collected, the collection point and the name of the person who collected the sample. All monitoring records will be kept in a legible form for a minimum of four years after the monitoring event.	**Senior Environment Coordinators** Environment Coordinators	Environmental inspection register Stop works register

Element 3: Auditing, review, and improvement

We will continually improve our environmental systems and environmental performance by monitoring and reviewing their effectiveness

Expectations	How will CPBG meet the Expectation?	Responsible Key Contributor	Deliverables
1.6. Review this Sub-Plan to ensure compliance	Review of this Sub-Plan will be undertaken in accordance with the final CEMP (SMWSASBT-CPG-1NL-EV-PLN-000002). If required, this Sub-Plan will be updated and provided to the ER under SSI 10051 Planning Approval Condition A32(j) for endorsement.	**Environment Manager** Environmental Coordinator	AQMP updates
1.7. Audits are undertaken to ensure compliance with the requirements of this Plan	Audits will be performed in line with the CEMP (SMWSASBT-CPG-1NL-EV-PLN-000002), and we will update this Sub-Plan and/or procedures if required. Procedures for corrective actions are addressed in the CEMP (SMWSASBT-CPG-1NL-EV-PLN-000002).	**Environment Manager** Environmental Coordinators	Audit Reports Corrective Action Reports
1.8. All non-compliances are reported and actioned	A non-conformance can generally be defined as a failure to comply with SSI 10051 Planning Approval or the EPBC Approval 2020/8687 Where a non-conformance is raised as part of an audit or an incident or complaint investigation the audit, incident or complaint report may be used to close out the non-conformance and it is not necessary to raise a separate non-conformance reporting process. Procedures for corrective actions are addressed in the CEMP (SMWSASBT-CPG-1NL-EV-PLN-000002).	**Environment Manager** Environmental Coordinators	Corrective Action Reports Complaint Reports Incident Reports Audit Reports

Element 4: Package specific requirements

SSI 10051 Planning Approval

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
Flooding					
E15	The CSSI must be designed and constructed with the objective of not exceeding the flood impacts presented in the documents listed in Condition A1 or the flood impact criteria in Table 5, whichever is greater, within and in the vicinity of the CSSI for all flood events up to and including the one (1) per cent Annual Exceedance Probability (AEP) flood event. Measures identified in the documents listed in Condition A1 to limit flooding impacts or measures that achieve the same outcome must be incorporated into the detailed design of the CSSI.	The SBT works will be designed and constructed with the objective of not exceeding the flood impact criteria detailed in this condition (Section 7.10) Measures to minimise the impacts of construction on flood conditions are detailed in the CEMP (Section 6.8)	**Design Manager** **Construction Managers**	Flood reports Flood models Geographic information system outputs	During Construction
E16	Updated modelling that incorporates these measures and is calibrated and validated with consideration of the results of the Wianamatta-South Creek Catchment Flood Assessment prepared by Infrastructure NSW as part of Stage 2 of the South Creek Sector Review must be prepared by a suitably qualified flood consultant. The modelling must identify changes in post-development flood behaviour including cumulative flood impacts associated with Western Sydney International Airport and the M12, where this information is available, prior to detailed design being finalised.	Updated flood modelling will be prepared in accordance with the requirements of this condition (Section 7.10).	**Design Manager**	Flood reports Flood models Geographic information system outputs	During Construction
E17	Where flooding characteristics exceed the levels identified in Condition E15 above the Proponent must undertake the following: (a) consult with affected landowners for properties adversely flood affected as a result of the CSSI regarding appropriate mitigations; and	Where flooding characteristics exceed the levels identified in Condition E15, CPBG will undertake required consideration with	**Design Manager**	Flood reports Flood models	During Construction

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
	(b) consult with the NSW State Emergency Service (SES) and Relevant Council(s) regarding the management of any continuous and residual flood risk from rarer flood events larger than the 1 per cent AEP and up to the probable maximum flood. In the event that the Proponent and the affected landowner cannot agree on the measures to mitigate the impact as described in Condition E15, the Proponent must engage a suitably qualified and experienced independent person to advise and assist in determining the impact and relevant mitigation measures.	the SES and relevant council(s) (Section 7.10). Consultation with affected landowners will be undertaken by Sydney Metro.		Geographic information system outputs	
E18	Flood information including flood reports, models and geographic information system outputs must be provided to the DPIE PDPS, Relevant Council(s), DPIE EES and the SES in order to assist in preparing relevant documents and to reflect changes in flood behaviour as a result of the CSSI. The DPIE PDPS, Relevant Council(s), DPIE EES and the SES must be notified in writing that the information is available no later than one (1) month following the completion of construction. Information requested by the DPIE PDPS, Relevant Council(s), DPIE EES or the SES must be provided no later than six (6) months following the completion of construction or within another timeframe agreed with the DPIE PDPS, Relevant Council(s), DPIE EES and the SES. The project flood models and data must be uploaded to the NSW Flood Data Portal and access must be provided to the DPIE PDPS, Relevant Council(s), DPIE EES and SES no later than one (1) month following the completion of construction.	Flood information will be provided to the DPE PDPS, relevant councils, DPE EES and the SES in accordance with the requirements of this condition (Section 7.10).	**Design Manager**	Flood reports Flood models Geographic information system outputs	During Construction
Contamination					
E92	Before commencement of any construction that would result in the disturbance of medium to high risk contaminated sites as identified in the documents identified in Condition A1, Detailed Site Investigations	A DSI Report will be prepared in accordance with the requirements of this	**Environment Manager**	DSI Report(s)	Prior to Construction

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
	(for contamination) must be conducted to determine the full nature and extent of the contamination. The Detailed Site Investigation Report(s) and the subsequent report(s), must be prepared, or reviewed and approved, by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme. The Detailed Site Investigations must be undertaken in accordance with guidelines made or approved under section 105 of Contaminated Land Management Act 1997 (NSW). Note: Nothing in this condition prevents the Proponent from preparing individual Detailed Site Investigation Reports (for contamination) for separate sites.	condition before commencement of any construction that would result in the disturbance of medium to high risk contaminated sites as identified in the EIS and Submissions Report. Refer to Section 7.9.1 for further details.			
E93	Should remediation be required to make land suitable for the final intended land use, a Remedial Action Plan must be prepared, or reviewed and approved, by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme. The Remedial Action Plan must be prepared in accordance with relevant guidelines made or approved by the EPA under section 105 of the Contaminated Land Management Act 1997 (NSW) and must include measures to remediate the contamination at the site to ensure the site will be suitable for the proposed use when the Remedial Action Plan is implemented. Note: Nothing in this condition prevents the Proponent from preparing individual Remedial Action Plans for separate sites.	As detailed in Section 7.9.1, remediation, where required, will be undertaken in accordance with the requirements of this Condition.	**Environment Manager**	RAP(s)	Prior to Construction

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
E94	Before commencing remediation, a Section B Site Audit Statement(s) must be prepared by an NSW EPA-accredited Site Auditor that certifies that the Remedial Action Plan(s) is/are appropriate and that the site can be made suitable for the proposed use. The Remedial Action Plan(s) must be implemented and any changes to the Remedial Action Plan(s) must be approved in writing by the NSW EPA-accredited Site Auditor. Note: Nothing in this condition prevents the Proponent from engaging an NSW EPA-accredited Site Auditor to prepare individual Site Audit Statements for Remedial Action Plans for separate sites.	A Section B Site Audit Statement(s) will be prepared in accordance with the requirements of this condition prior to commencement of remediation (Section 7.9.1).	**Environment Manager**	Section B Site Audit Statement(s)	Prior to remediation
E95	Validation Report(s) must be prepared in accordance with Consultants Reporting on Contaminated Land: Contaminated Land Guidelines (EPA, 2020) and relevant guidelines made or approved under section 105 of the Contaminated Land Management Act 1997 (NSW). Note: Nothing in this condition prevents the Proponent from preparing individual Validation Reports for separate sites.	Validation Report(s) will be prepared for remediated sites in accordance with the requirements of this condition (Section 7.9.1).	**Environment Manager**	Validation Report(s)	On completion of remediation
E96	A Section A1 or Section A2 Site Audit Statement (accompanied by an Environmental Management Plan) and its accompanying Site Audit Report, which state that the contaminated land disturbed by the work has been made suitable for the intended land use, must be submitted to the Planning Secretary and the Relevant Council(s) after remediation and before the commencement of operation of the CSSI. Note: Nothing in this condition prevents the Proponent from obtaining Section A Site Audit Statements for individual parcels of remediated land.	Site Audit Statement(s) will be prepared for remediated sites in accordance with the requirements of this condition (Section 7.9.1).	**Environment Manager**	Section A1 or Section A2 Site Audit Statement (accompanied by an Environmental Management Plan)	Prior to commencement of operation of the CSSI
E97	A copy of Detailed Site Investigation Report(s), Remedial Action Plan(s), Validation Report(s), Site Audit Report(s) and Site Audit Statement(s) must be submitted to the Planning Secretary and the Relevant Council(s) for information	The requirements of this Condition are addressed in Section 7.9.1.	**Environment Manager**	Document transmittals	Prior to commencement of operation of the CSSI

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
E98	An Unexpected Contaminated Land and Asbestos Finds Procedure must be prepared before the commencement of construction and must be followed should unexpected contaminated land or asbestos (or suspected contaminated land or asbestos) be excavated or otherwise discovered during construction.	The Unexpected Finds Protocol is detailed in Section 7.9.4.	**Environment Manager** Environmental Coordinator Site Supervisor	Unexpected Finds Protocol	During construction
E99	The Unexpected Contaminated Land and Asbestos Finds Procedure must be implemented throughout construction.	The Unexpected Finds Protocol is detailed in Section 7.9.4.	**Environment Manager** Environmental Coordinator Site Supervisor	Unexpected Finds Protocol	During construction
Water					
E126	The CSSI must be designed and constructed so as to maintain the NSW Water Quality Objectives (NSW WQO) where they are being achieved as at the date of this approval, and contribute towards achievement of the NSW WQO over time where they are not being achieved as at the date of this approval, unless an EPL in force in respect of the CSSI contains different requirements in relation to the NSW WQO, in which case those requirements must be complied with.	The requirements of this Condition are addressed in Section 7.5. A Discharge Impact Assessment has been developed and outlines how the NSW Water Quality Objectives will be maintained. An EPL for the Project will be obtained.	**Environment Manager** Environmental Coordinator Site Supervisors	Environmental inspection register Stop works register Periodically reviewed SWMP (this plan)	During Construction
Construction Requirements					

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
E127	The Proponent must consider the Guidelines for controlled activities on waterfront land riparian corridors (Department of Industry 2018) when carrying out work within 40 metres of a watercourse, including its bed.	The requirements of this Condition are not triggered by the SBT Works.	**N/A**	N/A	N/A
E128	Before undertaking any work and during maintenance or construction activities, erosion and sediment controls must be implemented and maintained to prevent water pollution consistent with Managing Urban Stormwater: Soils and Construction Vol 1 4th ed. by Landcom, 2004 (The Blue Book).	Erosion and sediment controls will be implemented as outlined in Section 7.4 and Section 9.2.	**Environment Manager** Environmental Coordinator Site Supervisors	Environmental inspection register Stop works register Periodically reviewed SWMP (this plan)	During Construction
E129	Unless an EPL is in force in respect to the CSSI and that licence specifies alternative criteria, discharges from construction wastewater treatment plants to surface waters must not exceed: (a) the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018 (ANZG (2018)) default guideline values for toxicants at the 95 per cent species protection level; (b) for physical and chemical stressors, the guideline values set out in Tables 3.3.2 and 3.3.3 of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 (ANZECC/ARMCANZ); and (c) for bio accumulative and persistent toxicants, the ANZG (2018) guidelines values at a minimum of 99 per cent species protection level. Where the ANZG (2018) does not provide a default guideline value for a particular pollutant, the approaches set out in the ANZG (2018) for deriving guideline values, using interim guideline values and/or using other lines of evidence such as international scientific literature or water quality guidelines from other countries, must be used.	Water Treatment Plants will be designed and operated to meet the discharge criteria proposed in the Discharge Impact Assessment and as specified in Section 7.5	**Environment Manager** Environmental Coordinator Site Supervisors	Discharge permits Periodically reviewed SWMP (this plan)	During Construction
E130	If construction stage stormwater discharges are proposed, a Water Pollution Impact Assessment will be required. Any such assessment must be prepared in consultation with the EPA and be consistent with	A Water Pollution Impact Assessment has been	**Environment Manager**	EWMS Discharge permits	During Construction

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
	the National Water Quality Guidelines, with a level of detail commensurate with the potential water pollution risk. *Note: If an EPL is required the Water Pollution Impact Assessment will be required to inform licensing consistent with section 45 of the POEO Act.*	developed as outlined in Section 9.1	Environmental Coordinator Site Supervisors	Periodically reviewed SWMP (this plan)	
E131	Drainage feature crossings (permanent and temporary watercourse crossings and stream diversions) and drainage swales and depressions must be carried out in accordance with relevant guidelines and designed by a suitably qualified and experienced person.	Drainage feature crossings will be designed by a suitably qualified and experienced person (refer to Section 7.4).	**Environment Manager** Environmental Coordinator Site Supervisors	ESCPs	During Construction
Groundwater					
E133	Make good provisions for groundwater users must be provided in the event of a material decline in water supply levels, quality or quantity from registered existing bores associated with groundwater changes from either construction and/or ongoing operational dewatering caused by the CSSI.	The GWMP (Section 2.4 and Section 3.2) addresses the requirement for make good provisions for groundwater users in the event of a material decline in water supply levels.	**Environment Manager** Environmental Coordinator Site Supervisors	Groundwater Monitoring Plan	During Construction
E134	The Proponent must submit a revised Groundwater Modelling Report to the Planning Secretary for information before bulk excavation at the relevant construction location. The Groundwater Modelling Report must include: (a) for each construction site where excavation will be undertaken, cumulative (additive) impacts from nearby developments, parallel transport projects and nearby excavation associated with the CSSI; (b) predicted incidental groundwater take (dewatering) including cumulative project effects;	The updated Groundwater Modelling Report will be provided to the Planning Secretary for information prior to commencement of bulk excavation (refer to Section 7.11).	**Environment Manager** Environmental Coordinator	Hydrogeological Interpretation Report Groundwater Model	During Construction

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
	(c) potential impacts of the CSSI or detail and demonstrate why the CSSI will not have lasting impacts to the groundwater system, ongoing groundwater incidental take and groundwater level drawdown effects; (d) actions required to minimise the risk of inflows (including in the event the CSSI are delayed or do not progress) and a strategy for accounting for any water taken beyond the life of the operation of the CSSI; (e) saltwater intrusion modelling analysis, from saline groundwater in shale, into metro station sites; and (f) a schematic of the conceptual hydrogeological model.				

Revised Environmental Mitigation Measures

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
HYD1	Construction planning would consider flood related mitigation, including: • Staging construction works to reduce the duration of works within the floodplain • Daily and continuous monitoring of weather forecasts and storm events, rainfall levels and water levels in key watercourses to identify potential flooding events and related flood emergency response • Consultation with NSW State Emergency Services and relevant local councils to ensure consistent approaches to the management of flood events (off-airport only)	The requirements of this REMM are reflected in the CEMP (Section 6.8 and in the indicative site layout plans in Annexure C).	**Construction Managers** Site Supervisors Environmental Coordinator Stakeholder and Community Engagement Manager and delegates	Consultation records Weather monitoring records Construction Area Plans	Pre-construction During Construction

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
	• Provide flood-proofing to excavations at risk of flooding during construction, where reasonable and feasible, such as raised entry into shafts and/or pump-out facilities to minimise ingress of floodwaters into shafts and the dive structure • Review of site layout and staging of construction works to avoid or minimise obstruction of overland flow paths and limit the extent of flow diversion required.				
WQ1	A surface water quality monitoring program would be implemented to monitor water quality during construction. The program would be developed in consultation with (as relevant) Western Sydney Airport, NSW Environment Protection Authority, relevant sections of Department of Planning, Industry and Environment and relevant local councils. The program would consider monitoring being undertaken as part of other infrastructure projects such as the M12 Motorway and Western Sydney International On-airport, the water quality monitoring program would ensure that works meet the requirements under Schedule 2 of the Airports (Environment Protection) Regulations 1997 The program would monitor all construction discharge locations.	Refer to the SWQMP (Annexure B, Section 2.3 and 3.2).	**Environment Manager** Environmental Coordinators	Water Monitoring Reports (every six months) EPL Monitoring Reports and Annual Returns Construction Compliance Reports (every six months) Monthly Environmental Report	Monthly during construction
WQ2	Water treatment plants would be designed to ensure that wastewater is treated to a level that is compliant with the ANZECC/ ARMCANZ (2000), ANZG (2018) and draft ANZG (2020) default guidelines for 95 per cent species protection and 99 per cent species protection level for toxicants that bioaccumulate unless other discharge criteria are agreed with relevant authorities.	Water treatment plants will be designed in accordance with the requirements of this REMM (Section 7.5)	**Construction Managers** Environment Manager Environmental Coordinators	Groundwater Review Report Groundwater Monitoring Report (six monthly)	Six monthly during construction

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
WQ3	The design and construction of the project would take into account the former NSW Office of Water's Guidelines for controlled activities on waterfront land.	The Guidelines for controlled activities on waterfront land will be considered during the pre-clearing inspection process prior to undertaking works. Refer to the Flora and Fauna Management Sub-Plan.	**Environment Manager** Environmental Coordinator Site Supervisors	Environmental inspection register Stop works register	During Construction
OHYD1	The flood model for the project would be updated with regard to flood modelling undertaken for the South Creek Sector Review (anticipated to be released in 2021) and would include updated calibration and validation. The updated flood modelling would be used to inform design development including but not limited to, addressing potential residual flood impacts identified at the following locations: • The viaduct and earthworks in the vicinity of Blaxland Creek so as to minimise the extent of the project within the floodplain • The earthworks arrangement at the stabling and maintenance facility in the area affected by the Probable Maximum Flood. The flood model for the project would be updated in consultation with relevant stakeholders.	The flood model for the project will be prepared by Sydney Metro. CPBG will provide Sydney Metro with any information or documentation it requires to comply with this REMM.	Design Manager	Flood reports Flood models Geographic information system outputs	During Construction
OHYD2	Develop localised stormwater management plans at St Marys Station and Aerotropolis Core Station to ensure these stations are protected from localised flooding.	The requirements of this REMM are reflected in the CEMP (Section 6.8).	**Construction Managers** Site Supervisors	Stormwater management plans	Pre-construction
OHYD3	Flood compatible design would need to be demonstrated for the permanent spoil placement areas to ensure compliance with applicable land use criteria.	The SBT works will be designed and constructed with the objective of not exceeding the flood impact criteria detailed in this condition (Section 7.10)	Design manager	Flood reports Flood models	During construction

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
				Geographic information system outputs	
OWQ1	Design batter slope gradients and surface treatments to minimise erosion risk.	The requirements of this REMM are addressed in the Erosion and Sediment Control Procedure (Annexure C).	**Project Engineers** Site Engineers Environmental Coordinators Site Supervisors	ESCP	During construction
OWQ3	Suitably designed scour and erosion controls should be included at drainage and sedimentation basin outlet discharge points.	The requirements of this REMM are addressed in the Erosion and Sediment Control Procedure (Annexure C).	**Project Engineers** Site Engineers Environmental Coordinators Site Supervisors	ESCP	During construction
OWQ5	Where feasible, on-site detention of stormwater would be introduced where stormwater runoff rates are increased. Where there is insufficient space for the provision of on-site detention, the upgrade of downstream infrastructure would be implemented where feasible and reasonable.	The requirements of this REMM are addressed in Section 7.6	**Project Engineers** Site Engineers Environmental Coordinators Site Supervisors	ESCP Design drawings	During construction
OWQ6	At all locations where stormwater is discharged, water quality measures such as gross pollutant traps, bio-retention swales and Water Sensitive Urban Design features would be investigated and implemented where feasible and reasonable.	The requirements of this REMM are addressed in Section 7.6	**Design Manager** Project Engineers Site Engineers Environmental Coordinators	ESCP Design drawings	During construction

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
			Site Supervisors		
GW5	Detailed hydrogeological and geotechnical models for the project would be developed and progressively updated during design and construction. These models would: • Be informed by the results of groundwater monitoring undertaken before and during construction • Identify predicted changes to groundwater levels, including at nearby water supply works and at groundwater dependent ecosystems or other sensitive groundwater receptors. Where changes to groundwater levels are predicted at nearby water supply works, groundwater dependent ecosystems or other sensitive groundwater receivers, an appropriate groundwater monitoring program would be developed and implemented. Where changes to groundwater level are close to the ground surface, dryland salinity monitoring would be implemented to allow for management of any identified impacts. The groundwater monitoring program would aim to confirm no adverse impacts on the receiver during construction or to effectively manage any impacts with the implementation of appropriate mitigation measures. Monitoring at any specific location would be subject to the status of the water supply work and agreement with the landowner.	The requirements of this REMM are addressed in Section 6.2.	**Design Manager** Environment Manager Environmental Coordinators	Hydrogeological and geotechnical models	During construction
GW6	A Groundwater Management Plan would be prepared and implemented. The plan must include the following trigger-action response measures in relation to groundwater levels in areas identified as subject to potential drawdown (at	The requirements of this REMM are addressed in the GWMP in Annexure A (Section 6.1.1 and Section 6.2.1 and 8.3)	**Environment Manager**	Groundwater Monitoring Report (six monthly)	Six monthly during construction

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
	groundwater dependent ecosystems or other sensitive receivers) but outside the construction footprint and Western Sydney International Stage 1 Construction Impact Zone: a. target criteria, set with reference to relevant standards and site specific parameters b. trigger values and corresponding corrective actions to prevent recurring or long-term exceedance of the target criteria described in (a) c. corrective actions to compensate for any recurring or long-term exceedance of the target criteria described in (a) Response measures may include: • Targeted ground improvement and grouting to limit groundwater inflows into station excavations, tunnels and cross-passage to reduce groundwater drawdown • Design of undrained temporary retention systems to minimise groundwater inflow into station excavations and reduce groundwater drawdown • Supplementing groundwater supply at affected groundwater dependent ecosystems or watercourses • Make good provisions for groundwater supply wells impacted by changes in groundwater level or quality.		Environmental Coordinator Project Engineers Site Engineers		

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
SC1	The Soil and Water Management Plan would incorporate the following measures: • for low risk areas of environmental concern, worker health and safety measures, waste management and tracking for contamination would be outlined. • for medium and high risk areas of environmental concern, detailed site investigations and review of further available information would be undertaken prior to the start of construction	For off-airport sites, site inspections, DSI Reports will be prepared in accordance with Condition E92 of the Planning Approval and REMMs SC1, SC2 and SC3. If a previously identified medium or high-risk area is reassessed as low risk (in accordance with the process detailed in Section 7.9.1), the site would be managed in accordance with this plan. For areas that are moderate or high risk, DSI Reports will be prepared and the results used to determine if remediation is required. If remediation is required, a RAP will be developed and implemented to address the SBT Works. Refer to Section 7.9.1 and Annexure C of this Sub-Plan for further detail.	**Environment Manager** Environmental Coordinator	DSI Report(s)	Prior to Construction
SC2	Based on outcomes of SC1: • if a medium or high risk area of environmental concern is reassessed as low risk, the site would be managed in accordance with the Soil and Water Management Plan. This would typically occur where there is minor, isolated contamination that can be readily remediated through standard construction practices such as excavation and off-site disposal • for areas of environmental concern that remain or change to medium risk, visual inspections and monitoring would be performed during earthworks. If suspected contamination is encountered, the materials would be subject to sampling and analysis to assess management requirements in accordance with statutory guidelines made or endorsed by the	As per SC1, refer to Section 7.9.1 and Annexure C of this Sub-Plan for further detail.	**Environment Manager** Environmental Coordinator	Unexpected find reporting DSI Report(s) SAQP(s)	Prior to Construction

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
	NSW Environment Protection Authority statutory guidelines • for areas of environmental concern that remain or change to high risk, a Sampling, Analysis and Quality Plan would be prepared for Detailed Site Investigations or data gap investigations. The results from the site investigations would be assessed against criteria contained within the National Environment Protection (Assessment of Site Contamination) Measure (2013) and other applicable NSW statutory guidelines to assess whether remediation is required. Remediation works would be performed in accordance with the hierarchy of preferred strategies in the Guidelines for the NSW Site Auditor Scheme (NSW Environment Protection Authority, 2017) and other guidelines made or endorsed by the NSW Environment Protection Authority. Where practical, remediation works would be integrated with excavation and development works performed during construction				
SC3	Where information gathered from investigations for medium and high risk areas of environmental concern (as per mitigation measure SC1) is insufficient to determine the risk of contamination, a detailed site investigation would be carried out in accordance with the National Environment Protection Measure (2013) and other guidelines made or endorsed by the NSW Environment Protection Authority Where data from the additional data review (mitigation measure SC1) or the detailed site investigation (mitigation measure SC2) confirms that contamination would require remediation, a Remediation Action Plan would be developed for the area of the construction footprint.	As per SC1, refer to Section 7.9.1 of this Sub-Plan for further detail.	**Environment Manager** Environmental Coordinator	DSI Report(s) RAP(s)	Prior to Construction

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
	If a Remediation Action Plan is required, it would be developed in accordance with NSW Environment Protection Authority statutory guidelines and a Site Auditor would be engaged. Remediation methodologies would be undertaken in accordance with Australian Standards and other relevant government guidelines and codes of practice Remediation would be performed as an integrated component of construction and to a standard commensurate with the proposed end use of the land				
SC4	If a duty to report to the NSW Environment Protection Authority under Section 60 of the Contaminated Lands Management Act 1997 is triggered, or where a medium to high risk of contamination is identified, an accredited Site Auditor would review and approve the Remediation Action Plan (including issue of interim audit advice) and would develop a Site Audit Statement and Site Audit Report upon completion of remediation	As per Section 8.2.3, CPBG has engaged the services of Ramboll Environ, which employs a number of EPA accredited site auditors to provide Interim Audit Advice and Site Audit Statements, where triggered	**Environment Manager** Environmental Coordinator	Site Audit Statement(s) Site Audit Report(s)	During construction
SC5	An unexpected finds procedure would be developed and implemented as part of the project Soil and Water Management Plan, outlining a set of potential contamination issues which could be encountered, and detailing the management actions to be implemented. The unexpected finds procedure would include a process for chemical and asbestos contamination and would generally include: • cessation of works within the affected area until inspection of the suspected contamination by a qualified contaminated lands consultant (verification by a certified contaminated land practitioner) • collection of soil samples for chemical or asbestos analysis, where required, based on observations	Unexpected finds will be managed in accordance with the Unexpected Finds Protocol detailed in Section 7.9.4.	**Environment Manager** Environmental Coordinator Site Supervisor	Unexpected find reports	Prior to and during construction

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
	• assessment of results against applicable land use or waste classification criteria in accordance with statutory guidelines made or endorsed by the NSW Environment Protection Authority statutory guidelines • management of the contamination in accordance with statutory guidelines made or endorsed by the NSW Environment Protection Authority statutory guidelines • the unexpected finds procedure for on-airport construction would be consistent with the Western Sydney Airport unexpected finds procedure detailed in the Soil and Water Construction Environmental Management Plan (Western Sydney Airport, 2019)				
SC6	Post construction, an inspection of construction, stockpiling and laydown sites and soil validation of redundant sedimentation/water quality basins would be undertaken to assess if further investigation and remediation is required. Investigation and remediation (if required) would be undertaken in accordance with the Soil and Water Management Plan (off-airport) and a project specific Remediation Action Plan that would be prepared in a manner consistent with the Western Sydney Airport Remediation Action Plan (2019) (on-airport). All inspections, investigations and remediation would be undertaken by a qualified contaminated lands consultant with reports prepared or reviewed by a Certified Contaminated Land Consultant.	The EPA contaminated land audit process, which applies to contamination investigation, remediation, validation and management, will be combined with a review by Sydney Metro, the Certified Contaminated Land Consultant and the ER. See Section 7.9.1 for further detail.	**Environment Manager** Environmental Coordinator	RAP(s) Validation Report(s)	Post construction
SC7	Prior to ground disturbance in areas of potential acid sulfate soil occurrence, testing would be carried out to determine the	Soil investigations will be undertaken prior to construction to assess the identified	**Environment Manager**	PASS testing reports	Prior to construction

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
	actual presence of acid sulfate soils. If acid sulfate soils are encountered, they would be managed in accordance with the Acid Sulfate Soil Manual (Acid Sulfate Soil Management Advisory Committee, 1998)	potential areas of inland ASS areas where tunnelling excavations are to be undertaken. ASS would be assessed in accordance with ASSMAC3 (1998) guidelines (and national guidelines where applicable) if greater than one tonne of ASS would be disturbed. An ASSMP will be prepared if the action criteria are exceeded to control earthworks and re-use, and appropriate receiving sites would be selected for excess spoil. See Section 7.9.3 for further detail.	Environmental Coordinator		
SC8	Prior to ground disturbance in high probability salinity areas testing would be carried out to determine the presence of saline soils. If salinity is encountered, excavated soils would not be reused or would be managed in accordance with Book 4 Dryland Salinity: Productive Use of Saline Land and Water (NSW DECC 2008). Erosion controls would be implemented in accordance with the Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom, 2004)	Soil investigations will be undertaken prior to construction to assess the identified potential areas of salinity. If salinity is found the material would be managed in accordance with Book 4 Dryland Salinity: Productive Use of Saline Land and Water (NSW DECC 2008) (Section 7.9.2). These areas will be included in an updated SEP.	**Environment Manager** Environmental Coordinator	Salinity testing reports	Prior to construction
SC9	Targeted groundwater investigations would be undertaken prior to construction to identify high salinity areas at risk from rising groundwater. Where high saline areas (>1000 µS/cm) are identified, measures such as planting, regenerating and maintaining native vegetation and good ground cover in	The requirements of this REMM are addressed by Sydney Metro.	N/A	N/A	N/A

[3] NSW Acid Sulfate Soils Management Advisory Committee (ASSMAC), 1998. Acid Sulfate Soil Assessment Guidelines. August, 1998.

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
	recharge, transmission and discharge zones would be implemented where possible				
SC10	Where the construction footprint is not used as part of the operational footprint (residual land), an assessment of the suitability of the site for the proposed land use would be undertaken in accordance with statutory guidelines made or endorsed by the NSW Environment Protection Authority	The requirements of this REMM are addressed by Sydney Metro.	N/A	N/A	N/A
SC11	For works within Western Sydney International: • A review of further available information from Western Sydney Airport would be undertaken prior to the commencement of construction, which may include review of investigations, the Western Sydney Airport Remediation Action Plan and validation reports Any remediation works (for contamination encountered by The Principal that has not been remediated by Western Sydney Airport) would be undertaken in accordance with the Principal Remediation Action Plan, developed in a manner consistent with the Western Sydney Airport Remediation Action Plan (Department of Infrastructure and Regional Development, 2019)	To be assessed in the On-Airport SWMP	N/A	N/A	N/A

Sydney Metro General Specification

No.	Requirement	How will CPBG meet this Requirement?	Responsible Key Contributor	Deliverables	Timing
2.11.6 (a)	Road Conditions (a) The SBT Contractor must ensure that any road, footpath, shared path or cycleway which is open to the public is at all times kept free of mud, dirt, dust, deleterious material, debris, obstructions and trip hazards arising from the SBT Contractor's Activities. [SM-WSA-SBT-GS-1638]	Roads, footpaths and shared areas will be routinely inspected for quick identification of issues and rectification. A sweeper cart will be on standby in the event of spilled materials and potential safety issues will also be identified by the safety team. See Section 7.4.	**Environment Manager** Environmental Coordinator Site Supervisors	Environmental inspection reports Safety inspection reports	Pre-construction Construction
2.11.6 (b)	The SBT Contractor must cover all construction vehicles to prevent any loss of fuels, lubricants, load or other substances, whether in the form of dust, liquids, solids or otherwise. [SM-WSA-SBT-GS-1639]	As per Section 7.4, all loads are to be covered to prevent material spill.	**Environment Manager** Environmental Coordinator Site Supervisors	Prestart discussions Toolboxes SWMS Environmental inspection reports Safety inspection reports	Pre-construction Construction

Environmental Protection Licence

No.	Requirement	How will CPBG meet the Expectation?	Responsibility	Deliverables	Timing
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. [Refer to EPL 21672, Condition P1.1 for the complete list of monitoring/discharge points]	The requirements of this condition are addressed through the Dewatering and Discharge Permit process (Section 7.6.1).	**Environment Manager** Environmental Coordinators	Dewatering and Discharge Permit	Construction
P1.2	All licensed monitoring and discharge points referred to in condition P1.1, must be approved by the EPA and identified: a) in the premises map(s) most recently submitted and approved in writing by the EPA under condition A2.2; and b) in a schedule submitted to the EPA. The schedule, including any proposed updates, must: i. be submitted to the EPA in electronic format no less than 5 days prior to any changes; ii. include unique identifiers consistent with the map(s) required by this condition; and iii. include easting and northing coordinates for all licensed monitoring and discharge points.	The requirements of this condition are addressed through the Dewatering and Discharge Permit process (Section 7.6.1).	**Environment Manager** Environmental Coordinators	Dewatering and Discharge Permit	Construction
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.	The requirements of this condition are addressed through the Dewatering and Discharge Permit process (Section 7.6.1).	**Environment Manager** Environmental Coordinators	Dewatering and Discharge Permit	Construction
L2.1	For each monitoring/discharge point or utilisation area specified in the table\s below (by a point number), the	The requirements of this condition are addressed	**Environment Manager**	Dewatering and Discharge Permit	Construction

<table>
<tr><th>No.</th><th>Requirement</th><th>How will CPBG meet the Expectation?</th><th>Responsibility</th><th>Deliverables</th><th>Timing</th></tr>
<tr><td></td><td>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.</td><td>through the Dewatering and Discharge Permit process (Section 7.6.1).</td><td>Environmental Coordinators</td><td></td><td></td></tr>
<tr><td>L2.2</td><td>Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.</td><td>The requirements of this condition are addressed through the Dewatering and Discharge Permit process (Section 7.6.1).</td><td>Environment Manager

Environmental Coordinators</td><td>Dewatering and Discharge Permit</td><td>Construction</td></tr>
<tr><td>L2.3</td><td>To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those

specified in the table\s.</td><td>The requirements of this condition are addressed through the Dewatering and Discharge Permit process (Section 7.6.1).</td><td>Environment Manager

Environmental Coordinators</td><td>Dewatering and Discharge Permit</td><td>Construction</td></tr>
<tr><td>L2.4</td><td>Water and/or Land Concentration Limits

POINT 1,2,3,4,5
<table>
<tr><th>Pollutant</th><th>Units of Measure</th><th>50 Percentile concentration limit</th><th>90 Percentile concentration limit</th><th>3DGM concentration limit</th><th>100 percentile concentration limit</th></tr>
<tr><td>Oil and Grease</td><td>Visible</td><td></td><td></td><td></td><td>Not Visible</td></tr>
<tr><td>pH</td><td>pH</td><td></td><td></td><td></td><td>6.5-8.5</td></tr>
<tr><td>Turbidity</td><td>nephelometric turbidity units</td><td></td><td></td><td></td><td>50</td></tr>
</table></td><td>The requirements of this condition are addressed through the Dewatering and Discharge Permit process (Section 7.6.1).</td><td>Environment Manager

Environmental Coordinators</td><td>Dewatering and Discharge Permit</td><td>Construction</td></tr>
<tr><td>L2.5</td><td>Exceeding the limits specified in Condition L2.4 of this licence for discharges from the discharge point(s) identified by conditions P1.1 is only permitted if:

a) the discharge occurs solely as a result of rainfall measured at the premises exceeding the design rainfall depth value for the corresponding discharge point; and</td><td>The requirements of this condition are addressed through the Dewatering and Discharge Permit process (Section 7.6.1).</td><td>Environment Manager

Environmental Coordinators</td><td>Dewatering and Discharge Permit</td><td>Construction</td></tr>
</table>

No.	Requirement	How will CPBG meet the Expectation?	Responsibility	Deliverables	Timing
	b) The sediment basins and other erosion and sediment controls corresponding to the discharge point(s) have been designed, constructed, operated and maintained in accordance with condition O4.2 of this licence.				
O4.1	The licensee must implement all feasible and reasonable erosion and sediment controls as may be necessary throughout the life of works and activities to minimise sediment leaving the premises.	Erosion and sediment controls will be established and maintained in accordance with the requirements of this Condition (refer to Section 7.4)	**Site Supervisor** Environmental Coordinators	Environmental Inspection Checklists	Construction
O4.2	The licensee must ensure erosion and sediment controls are designed, constructed, operated and maintained consistent with the principle and practices of industry best practice, including: a) Managing Urban Stormwater – Soils and Construction, Volume 2D, Main Road Construction (DECC, 2008), to be read and used in conjunction with Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition (Landcom, 2004); b) Best Practice Erosion and Sediment Control (IECA 2008); and c) other industry best practice documents if it can demonstrate the guidance will provide improved or equivalent outcomes for the environment and meet the requirements of condition L1.1 of this licence.	Erosion and sediment controls will be established and maintained in accordance with the requirements of this Condition (refer to Section 7.4)	**Site Supervisor** Environmental Coordinators	Environmental Inspection Checklists	Construction
O4.3	The licensee must ensure:	Erosion and sediment controls will be established and	**Site Supervisor**	Environmental Inspection Checklists	Construction

No.	Requirement	How will CPBG meet the Expectation?	Responsibility	Deliverables	Timing
	a) all vehicular access points to the premises are designed, constructed, maintained and stabilised to minimise vehicles tracking materials onto public roads and roads outside the premises as much as is reasonable and feasible; b) vehicle, motorised plant and equipment movements onto or off the premises minimise the deposition of any material onto the surface of roads outside of the premises; c) mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer, motorised plant and equipment leaving the premises, is removed to the greatest extent practicable before it leaves the premises; and d) road surfaces subject to any tracking of material by vehicles leaving the premises must be cleaned as required to ensure compliance with a) and b) of this condition and condition L1.1 of this licence.	maintained in accordance with the requirements of this Condition (refer to Section 7.4)	Environmental Coordinators		
O4.4	The licensee must: a) ensure the design storage capacity of any sediment basin installed on the premises is reinstated within the design management period following the cessation of a rainfall event that causes runoff to occur on or from the premises; and b) keep records of the available water and sediment storage capacities in each sediment basin and provide to an authorised officer upon request.	Sediment basins will maintained in accordance with the requirements of this Condition (refer to Section 7.6).	**Site Supervisor** Environmental Coordinator	Sediment basin storage capacity register	Construction
O4.5	The licensee must ensure that sampling point(s) for water discharged from the sediment basin(s) are provided and maintained in an appropriate condition to permit:	Sampling points will be maintained in accordance with the requirements of	**Site Supervisor** Environmental Coordinator	Environmental Inspection Checklist	Construction

No.	Requirement	How will CPBG meet the Expectation?	Responsibility	Deliverables	Timing
	a) the clear identification of each sediment basin and discharge point; b) the collection of representative samples of the water discharged from the sediment basin(s); and c) access to the sampling point(s) at all times by an authorised officer of the EPA.	this Condition (refer to Section 7.6.1)			
M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	Refer to Element 2: Monitoring and Reporting	**Environmental Coordinator**	Environmental monitoring records	Construction
M1.2	All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form; b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.	Refer to Element 2: Monitoring and Reporting	**Environmental Coordinator**	Environmental monitoring records	Construction
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken; b) the time(s) at which the sample was collected; c) the point at which the sample was taken; and d) the name of the person who collected the sample.	Refer to Element 2: Monitoring and Reporting	**Environmental Coordinator**	Environmental monitoring records	Construction
M2.1	For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the	The requirements of this condition are addressed through the Dewatering	**Environment Manager**	Dewatering and Discharge Permit	Construction

<table>
<tr><th>No.</th><th>Requirement</th><th>How will CPBG meet the Expectation?</th><th>Responsibility</th><th>Deliverables</th><th>Timing</th></tr>
<tr><td></td><td>concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:</td><td>and Discharge Permit process (Section 7.6.1).</td><td>Environmental Coordinators</td><td></td><td></td></tr>
<tr><td>M2.2</td><td>Water and/ or Land Monitoring Requirements
POINT 1,2,3,4,5
<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></td><td>The requirements of this condition are addressed through the Dewatering and Discharge Permit process (Section 7.6.1).</td><td>Environment Manager
Environmental Coordinators</td><td>Dewatering and Discharge Permit</td><td>Construction</td></tr>
<tr><td>M2.3</td><td>For the purposes of Condition M2.2 and the Table thereto, ‘Special Frequency 1’ means:
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
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.</td><td>The requirements of this condition are addressed through the Dewatering and Discharge Permit process (Section 7.6.1).</td><td>Environment Manager
Environmental Coordinators</td><td>Dewatering and Discharge Permit</td><td>Construction</td></tr>
<tr><td>M3.1</td><td>Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.</td><td>The requirements of this condition are addressed through the Dewatering and Discharge Permit process (Section 7.6.1).</td><td>Environment Manager
Environmental Coordinators</td><td>Dewatering and Discharge Permit</td><td>Construction</td></tr>
</table>

<table>
<tr><th>No.</th><th>Requirement</th><th>How will CPBG meet the Expectation?</th><th>Responsibility</th><th>Deliverables</th><th>Timing</th></tr>
<tr><td>E2.1</td><td>The licensee must undertake monthly surface water monitoring at discharge point 1 identified in Condition P1.1 for a minimum of 6 months from the date of issue of this licence.

Monthly monitoring results must include:

a) quality and quantity of all parameters that are identified in the table in E2.2 at each discharge point; and

b) results must be submitted to the EPA no more than 2 weeks after each monthly monitoring event has occurred for a minimum of 6 months from the date of issue of this licence.</td><td>Refer to 7.6.2</td><td>Environmental Coordinator</td><td>Environmental monitoring records</td><td>Construction</td></tr>
<tr><td>E2.2</td><td>Surface water quality monitoring parameters
<table>
<tr><th>Catergory</th><th>Measured</th><th>Parameters</th></tr>
<tr><td>Physio-chemical parameters</td><td>In-field using a calibrated multi parameter probe.</td><td>• Temperature (°C)
• Dissolved Oxygen (% saturation)
• Electrical Conductivity (µS/cm)
• Reduction-Oxidation Potential (Redox)(mV)
• pH
• Total suspended solids (TSS)
• Turbidity (NTU)
• Visible oil and grease</td></tr>
<tr><td>Metals</td><td>Laboratory testing</td><td>• Aluminium
• Arsenic (III and V)
• Cadmium
• Cobalt
• Chromium (III and VI)
• Copper
• Lead
• Manganese
• Mercury
• Nickel
• Vanadium
• Zinc</td></tr>
<tr><td>Organochlorine Pesticides</td><td>Laboratory testing</td><td>• Endosulphan
• Methoxychlor</td></tr>
<tr><td>Total Petroleum Hydrocarbons</td><td>Laboratory testing</td><td>• TPH C10-C36 Fraction
• TPH C6-C9 Fraction</td></tr>
</table></td><td>Refer to 7.6.2</td><td>Environmental Coordinator</td><td>Environmental monitoring records</td><td>Construction</td></tr>
</table>

Annexure A Groundwater Monitoring Program

SYDNEY METRO - WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

Groundwater Monitoring Program

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works

Project number	WSA-200-SBT
Document number	SMWSASBT-CPG-SWD-SW000-GE-RPT-040404
Revision date	21 September 2022
Revision	1

Document approval

Rev	Date	Prepared by	Reviewed by	Remarks
A	02/03/2022	Casey O'Farrell (Tetra Tech Coffey) David Harris (Epic Consulting)	Mike Hillman / John Sweeney	Initial draft issue
B	28/03/2022	Casey O'Farrell (Tetra Tech Coffey) David Harris (Epic Consulting)	Mike Hillman	Second draft issue
C	14/04/2022	Casey O'Farrell (Tetra Tech Coffey)	-	Third draft issue
D	24/05/2022	Casey O'Farrell (Tetra Tech Coffey)	D Corish	Nil
0	9/092022	D. Corish	E. Kline	Revised in response to stakeholder consultation
1	21/09/2022	D. Corish	E. Kline	Revised in response to ER comments

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Definitions

Term	Definition
AIP	Aquifer Interference Policy
ANZG (2018)	Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2018)
ASS	Acid Sulfate Soil
CEMP	Construction Environmental Management Plan
CPBG	CPB Contractors Gella Joint Venture
CoA	Conditions of Approval
CSSI	The Critical State Infrastructure, as described in Schedule 1, the carrying out of which is approved under the terms of the SSI 10051 approval
DPE	NSW Department of Planning and Environment
DQO	Data Quality Objective
EC	Electrical Conductivity
EIS	Sydney Metro Western Sydney Airport – Environmental Impact Statement
EMM	Environmental Management Measures
EMS	Environmental Management System
EPA	NSW Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)
EPL	Environment Protection Licence
EWMS	Environmental Work Method Statements
GDEs	Groundwater Dependent Ecosystems
GIR	Geological Interpretative Report
GWMP	Groundwater Monitoring Program
GWQ	Groundwater Quality
HIR	Hydrogeological Interpretive Report
LOR	Limit of Reporting
m AHD	Elevation in metres with respect to the Australian Height Datum
mbgl	Metres below ground level
mbtoc	Metres below top of casing
m/day	Metres per day
m/s	Metres per second
NRAR	Natural Resources Access Regulator

Term	Definition
PIRMP	Pollution Incident Response Management Plan
POEO Act	Protection of the Environment Operations Act 1997
RPD	Relative Percent Difference
SMART	Specific, Measurable, Achievable, Realistic, and Time-based goals
SSTV	Site-Specific Trigger Value
TBM	Tunnel boring machine
TfNSW	Transport for NSW
µS/cm	Micro-Siemens per centimetre
WSI	Western Sydney International
WTP	Water Treatment Plant

1 Introduction

1.1 Project overview

This NSW (Off-airport) Groundwater Monitoring Program (GWMP) is applicable to the Station Boxes and Tunnelling Works (SBT Works) Package of the Sydney Metro Western Sydney Airport (the Project) and is an Appendix of the Soil and Water Management Sub-Plan (SWMP). This GWMP describes how the CPB Contractors Ghella Joint Venture (CPBG) will monitor the groundwater impacts of the SBT Works in NSW.

The Project forms part of the broader Sydney Metro network. It involves the construction and operation of a new 23km metro rail line 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 tunnels and civil structures, including a viaduct, bridges, and surface and open-cut troughs between the two tunnel sections (Figure 1).

The Project will be delivered through several works packages including the SBT Works, which includes the design and construction of:

- Two sections of twin tunnels with a combined length of approximately 9.8km, plus associated portal structures, one from Orchard Hills to St Marys and the other under Western Sydney International (WSI) airport to the new Aerotropolis Station
- 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 services facilities, one in each of the tunnel sections at Claremont and Bringelly.

1.2 SBT Works scope

The construction methodology for the SBT Works entails:

- Utility works including removal, diversion, protection and connection to SBT worksites
- Local area works including provision of site accesses and some road upgrades
- Site establishment works including:
  - Fencing
  - Installation of environmental mitigation measures including erosion and sediment controls, noise barriers and acoustic enclosures
  - Clearing and grubbing of existing vegetation
  - Demolition of existing buildings and structures
  - Site levelling and drainage works
  - Establishment of internal access roads, hardstand areas and onsite parking
  - Erection of demountable buildings including offices and amenities
  - Other ancillary facilities including the erection of sheds, establishment of materials laydown and stockpiling areas and Tunnel Boring Machine (TBM) support works including spoil conveyors.
- Construction of station, shaft and dive excavations predominately completed by piling and excavators with rippers and hammers. Roadheaders will also be used at St Marys and Aerotropolis to complete the stub tunnels
- Construction of mainline tunnels using four TBMs, as follows:

- Two earth pressure balance TBMs will be launched from Orchard Hills and tunnel north to St Marys a distance of approximately 4.3km, including traversing the Claremont Shaft. The TBMs will be retrieved from the St Mary's station box.
- Two double shield TBMs will be launched from the Airport Dive and tunnel south, traverse the Airport Terminal station box and shaft, where tunnelling will stop and the conveyor and backend equipment will be demobilised from the Airport Dive and re-established at the Airport Terminal Shaft. The TBMs will then recommence tunnelling, including traversing the Bringelly Shaft, and will be retrieved from the Aerotropolis station box (5.5km from the Airport Dive, with 2.5km of the southern tunnels located within NSW).
- Cross passages will be constructed using concrete saws and excavators with hammers.

It is anticipated that the shaft and station excavations will be completed in advance of TBM tunnel construction. The TBMs will be delivered via oversize heavy vehicles to Orchard Hills and the Airport Dive site and retrieved from St Marys and Aerotropolis, subject to relevant approvals.

The SBT Works do not include any surface works between the northern and southern tunnel sections, which are to be undertaken by another contractor.

Tunnelling, including station box, shaft and dive excavation and associated support activities will occur 24 hours a day, seven days a week. Utility and local area works that cannot be completed during standard daytime hours due to Road Occupancy Licence or utility authority requirements will also be undertaken out of hours.

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. The exception is the temporary precast facility, where the site will be decommissioned following the completion of segment manufacture and storage, and hydroseeded.

An overview of works at each SBT worksite is provided in Table 1-1.

Table 1-1: SBT Worksite overview

Jurisdiction	Worksite	Indicative scope of works
NSW	St Marys	• Demolition of existing industrial premises • Offices, amenities, car parking and access roads • Piling and station box excavation using rippers and rock hammers • Stub tunnel excavation using road headers • TBM retrieval.
NSW	Claremont Meadows	• Offices, amenities, car parking and access roads • Piling and services facility shaft excavation using ripper and rock hammers • Construction of part of the cast-in-situ permanent shaft • Cross passage construction support • Invert construction support (subject to Sydney Metro approval).
NSW	Orchard Hills	• Demolition of existing buildings and removal of septic tanks • Offices, amenities, car parking and access roads • Lansdowne Road temporary diversion and construction of the permanent road bridge • Piling and portal, station box and dive excavation using rippers and rock hammers • Construction of cast-in-situ permanent portal structure • TBM assembly, launch and tunnelling support works • Cross passage construction support.
On-Airport	Airport Portal Dive Structure	• Offices, amenities, car parking and access roads • Piling and portal excavation using rippers and rock hammers • Open cut dive excavation using rippers and rock hammers

Jurisdiction	Worksite	Indicative scope of works
		• Construction of cast-in-situ permanent dive structure • TBM assembly, launch and tunnelling support works • Cross passage construction support.
On-Airport	Airport Terminal and TBM shaft	• Offices, amenities car parking and access roads • Piling and station box and shaft excavation using rippers and rock hammers • TBM re-launch and tunnelling support works • Cross passage construction support.
On-Airport	Precast Facility	• Offices, amenities, car parking and access roads • Precast facility • Materials laydown • Segment storage • General storage.
On-Airport	Primary Spoil Receival	• Access road • TBM spoil conveyor set up • Earthworks in accordance with Sydney Metro Specifications.
NSW	Bringelly	• Offices, amenities, car parking and access roads • Piling and services facility shaft using rippers and rock hammers • Construction of part of the cast-in-situ permanent shaft • Cross passage construction support • Invert construction support (subject to Sydney Metro approval).
NSW	Aerotropolis	• Offices, amenities, car parking and access roads • Piling and station box excavation using rippers and rock hammers • Stub tunnel excavation using roadheaders • TBM retrieval

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

Figure 1-1: Overview of SBT works

1.3 Purpose and objectives of this GWMP

The purpose of the GWMP is to describe how CPBG propose to monitor the extent and nature of potential impacts to the groundwater level and quality during the SBT Works.

The GWMP will be implemented to monitor the effectiveness of mitigation measures applied during the construction phase of the SBT Works. Monitoring of groundwater will be undertaken to identify potential impacts and ensure a comprehensive management regime can be implemented to address those impacts and manage local groundwater quality.

Reflecting the requirements of Condition C13(b), this GWMP supports the SWMP by detailing the groundwater monitoring network, frequency of monitoring, and test parameters.

This GWMP is based on baseline studies developed for the Western Sydney Airport (WSA) Environmental Impact Statement (EIS) (WSP and AECOM 2020), baseline monitoring reports (Cardno 2021), and additional information sources as listed in Section 2 of the Hydrogeological Interpretative Report (HIR), (Document reference: SMWSASBT-CPG-SWD-SW000-GE-RPT-040403). Investigation works are ongoing and as such, the recommendations included in this report will need to be updated as the fieldwork program progresses, and additional data is available.

This GWMP details specific steps that are required to monitor groundwater in accordance with the SSI 10051 Planning Approval and management and mitigation measures outlined in the Soil and Water Sub-Plan. Specifically, the purpose of this GWMP is to:

- Assist CPBG to manage the impacts of the SBT Works to ensure there are no unintended consequences to the pre-existing hydrogeological regime
- Ensure mitigation and management measures are achieving the stated objectives
- Identify if adaptive management responses are required to further manage groundwater impacts.

The objectives of the GWMP are to:

- Ensure compliance with:
  - State Significant Infrastructure (SSI) 10051 Planning Approval (dated 23 July 2021)
  - Sydney Metro Western Sydney Airport – CSSI Staging Report (Revision 6.0) (Staging Report)
  - Sydney Metro Construction Environmental Management Framework (CEMF)
  - EIS and the Submissions Report, including the Revised Environmental Mitigation Measures (REMMs)
  - Environment Protection Licence (EPL) (on receipt)
  - Contractual requirements, including the SBT Design and Construction Deed and General and Particular Specifications
  - Applicable legislation
- Reduce the potential for drawdown of surrounding groundwater resources
- Prevent the pollution of groundwater through appropriate controls
- Reduce the potential impacts of groundwater dependent ecosystems
- Confirm no adverse impacts on the receiver during construction or to effectively manage any impacts with the implementation of appropriate mitigation measures.

The objectives will be achieved by:

- Establishing monitoring parameters that enable comparison of the actual construction performance against the predicted performance of mitigation measures
- Identifying thresholds for monitoring parameters that if exceeded will trigger the need for management responses
  Scheduling and assignment of responsibilities of monitoring requirements.

1.4 Scope of groundwater monitoring program

The scope of this GWMP is to describe how CPBG will monitor the extent and nature of potential impacts to groundwater levels and quality during the SBT Works which will allow for implementation of appropriate management measures to address construction impacts.

Operational monitoring measures do not fall within the scope of the construction phase and therefore are not included in this GWMP.

1.4.1 Technical requirements

This GWMP includes the following:

- Groundwater monitoring to be undertaken, including the location and frequency of monitoring and parameters to be monitored
- Detail of water treatment plant monitoring to be undertaken
- Detail regarding analysis and reporting of monitoring data.

1.4.2 Conditions of Approval, REMMs and CEMF

The Conditions of Approval, REMMs and CEMF requirements of relevance to the GWMP are presented in Table 1-2 together with a cross-reference to where the requirement is addressed in this document.

Table 1-2: Conditions requirement relevant to groundwater

Condition	Requirement	Reference
Conditions of Approval		
C14 (a)	details of baseline data available including the period of baseline monitoring;	Section 5.1 (Baseline monitoring)
C14 (b)	details of baseline data to be obtained and when;	Section 5.2 (Additional baseline monitoring and assessment)
C14 (c)	details of all monitoring of the project to be undertaken;	Section 5.2 (Additional baseline monitoring and assessment) Section 6 (Construction monitoring)
C14 (d)	the parameters of the project to be monitored;	Sections 5 and 6 (Baseline and Construction Groundwater monitoring) Section 7 (Monitoring methodology)
C14 (e)	the frequency of monitoring to be undertaken;	Sections 5 and 6 (Baseline and Construction Groundwater monitoring) Section 7 (Monitoring methodology)
C14 (f)	the location of monitoring;	Sections 5 and 6 (Baseline and Construction Groundwater monitoring)
C14 (g)	the reporting of monitoring results and analysis results against relevant criteria;	Section 7 (Monitoring methodology) Section 8 (Compliance management)
C14 (h)	details of the methods that will be used to analyse the monitoring data;	Section 7 (Monitoring methodology) Section 8.3 (Data analysis)

Condition	Requirement	Reference
C14 (i)	procedures to identify and implement additional mitigation measures where the results of the monitoring indicated unacceptable project impacts;	Section 6 (Construction monitoring)
C14 (j)	a consideration of SMART principles;	Sections 5 and 6 (Baseline and construction Groundwater monitoring) and Table A1, Annexure A
C14 (k)	any consultation to be undertaken in relation to the monitoring programs; and	Section 1.5 (Stakeholder consultation and approvals)
C14 (l)	any specific requirements as required by Conditions C15 to C16	Table 1-2
C16 (a)	Groundwater monitoring networks at each construction excavation site predicted to intercept groundwater in the documents listed in Condition A1;	Sections 5 and 6 (Baseline and construction Groundwater monitoring)
C16 (b)	Detail of the location of all monitoring bores with nested sites to monitor both shallow and deep groundwater levels and quality;	Sections 5 and 6 (Baseline and construction Groundwater monitoring)
C16 (c)	Define the location of saltwater interception monitoring where sentinel groundwater monitoring bores will be installed between the saline sources and that of each construction excavation site predicted to intercept groundwater in the documents listed in Condition A1;	Section 2.4 (Groundwater quality) Section 5.1 (Baseline monitoring) Section 6 (Construction monitoring)
C16 (d)	Results from existing monitoring bores;	Section 2.3 and 2.4 (Groundwater levels and quality) Section 5.1 (Baseline monitoring) Appendix D (Water Quality data summary)
C16 (e)	Monitoring and gauging of groundwater inflow to the excavations predicted to intercept groundwater in the documents listed in Condition A1, appropriate trigger action response plan for all predicted groundwater impacts upon each noted neighbouring groundwater	Section 6 (Construction monitoring) Section 7 (Monitoring methodology)
C16 (f)	Trigger levels for groundwater quality, salinity and groundwater drawdown in monitoring bores and / or other groundwater users;	Section 6 (Construction monitoring)
C16 (g)	Daily measurement of the amount of water discharged from the water treatment plants;	Section 7 (Monitoring methodology)
C16 (h)	Water quality testing of the water discharged from treatment plants;	Section 6 (Construction monitoring) Section 4.3 (Groundwater quality)
C16 (i)	Management and mitigation measures and criteria, including measures to address impacts	Section 6 (Construction monitoring) Section 7 (Environmental impacts)

Condition	Requirement	Reference
C16 (j)	Groundwater inflow to the excavations to enable a full accounting of the groundwater take from the Sydney Basin Central Groundwater Source;	Section 5.2 (Construction monitoring) *And Groundwater modelling report*
C16 (k)	Reporting of groundwater gauging at excavations, groundwater monitoring, groundwater trigger events and action responses; and	Section 5.2 (Construction monitoring) *And Groundwater modelling report*
C16 (l)	Methods for providing the data collected to Sydney Water where discharges are directed to their assets	Section 1.5 (Stakeholder engagement) Section 8.5 (Reporting)
E133	Make good provisions for groundwater users must be provided in the event of a material decline in water supply levels, quality or quantity from registered existing bores associated with groundwater changes from either construction and/or ongoing operational dewatering by the CSSI	Section 2.4 (Groundwater Users) Section 3.2 (Environmental Impacts)
REMMs		
GW5	Detailed hydrogeological and geotechnical models for the project would be developed and progressively updated during design and construction. These models would: • Be informed by the results of groundwater monitoring undertaken before and during construction • Identify predicted changes to groundwater levels, including at nearby water supply works and at groundwater dependent • ecosystems or other sensitive groundwater receptors.	Hydrogeological and geotechnical models are detailed in the Project-Wide Groundwater Modelling Report (SMWSASBT-CPG-SWD-SW000-GE-RPT-040402)
GW5	Where changes to groundwater levels are predicted at nearby water supply works, groundwater dependent ecosystems or other sensitive groundwater receivers, an appropriate groundwater monitoring program would be developed and implemented.	The SBT Works are not located in the vicinity of water supply works.
GW5	Where changes to groundwater level are close to the ground surface, dryland salinity monitoring would be implemented to allow for management of any identified impacts.	The SBT Works will not result in changes to groundwater level close to the surface and as such, the requirements of this REMM are not triggered.
GW5	The groundwater monitoring program would aim to confirm no adverse impacts on the receiver during construction or to effectively manage any impacts with the implementation of appropriate mitigation measures. Monitoring at any specific location would be subject to the status of the water supply work and agreement with the landowner.	Section 1.3 Section 6
GW6	A Groundwater Management Plan would be prepared and implemented. The plan must include the following trigger-action response measures in relation to groundwater levels in areas identified as subject to potential drawdown	Section 6.1.1 (GDE Monitoring Performance Criteria)

Condition	Requirement	Reference
	(at groundwater dependent ecosystems or other sensitive receivers) but outside the construction footprint and Western Sydney International Stage 1 Construction Impact Zone: a. target criteria, set with reference to relevant standards and site specific parameters b. trigger values and corresponding corrective actions to prevent recurring or long-term exceedance of the target criteria described in (a) c. corrective actions to compensate for any recurring or long-term exceedance of the target criteria described in (a) Response measures may include: • Targeted ground improvement and grouting to limit groundwater inflows into station excavations, tunnels and cross-passage to reduce groundwater drawdown • Design of undrained temporary retention systems to minimise groundwater inflow into station excavations and reduce groundwater drawdown • Supplementing groundwater supply at affected groundwater dependent ecosystems or watercourses • Make good provisions for groundwater supply wells impacted by changes in groundwater level or quality.	Section 6.2.1 (Groundwater Quality Performance Criteria) Section 8.3 (Data Analysis and Response)
SC9	Targeted groundwater investigations would be undertaken prior to construction to identify high salinity areas at risk from rising groundwater. Where high saline areas (>1000 μS/cm) are identified, measures such as planting, regenerating and maintaining native vegetation and good ground cover in recharge, transmission and discharge zones would be implemented where possible.	Section 5.1 Section 6.1.1
CEMF		
7.2 (b) viii	Details of groundwater monitoring if required.	Section 6 (Construction monitoring)

1.5 Stakeholder consultation and approvals

Reflecting the requirements of Conditions A6 and C13(c), this GWMP will be prepared in consultation with DPE Water. A detailed consultation report, including matters raised by stakeholders and CPBG responses will be provided in Annexure D of the SWMP.

This GWMP will be updated to address any relevant comments prior to submission to the Environmental Representative (ER) for endorsement. In accordance with the Staging Report (Revision 5), this GWMP will also be submitted to the Planning Secretary of the DPE for approval The submission of this GWMP to the ER for endorsement and the Planning Secretary for approval will occur no later than one month before the commencement of the Bulk Excavation and Tunnelling Works.

Construction will not commence until this GWMP has been endorsed by the ER and approved by the Planning Secretary. This GWMP, as approved by the Planning Secretary, including any minor amendments approved by the ER, will be implemented for the duration of the SBT Works.

Consultation with Sydney Water, including engagement on monitoring and reporting requirements, will also be undertaken where Sydney Water assets are used to receive discharged water from the SBT Works, as part of a trade waste agreement or similar. The monitoring and reporting requirements for trade waste discharges will be covered under the SWMP for the project.

An Environment Protection Licence (EPL) (21672) has been obtained for the SBT Works. Subsequent variations of EPL 21672 will specify discharge criteria from construction wastewater treatment plants to surface waters. Consistent with Condition E130 and section 45 of the POEO Act, a Discharge Impact Assessment has been prepared to inform licensing.

1.6 Groundwater Regulatory framework and legislation

Groundwater in NSW is regulated by the Department of Primary Industry Water (DPI Water) under the *Water Act 1912* (NSW) and the *Water Management Act 2000* (NSW). If an activity results in the removal of water from a water source, movement of water from one part of an aquifer to another, or movement of water from one water source to another water source, then approval and/or license is required.

The *Water Management Act 2000* requires:

- A Water Access Licence (WAL) with adequate water allocation (or shares) within a specified water management area
- A Water Supply Works Approval authorises the holder to construct and use specified water supply work (dewatering pumps, sump pumps etc.)
- A Water Use Approval to use the water for a particular purpose.

The processes and requirements that DPI Water apply to assess aquifer interference of a project under the *Water Management Act 2000* are outlined in the Aquifer Interference Policy (AIP) (NSW Office of Water (2012)). This assessment process has been considered in the Hydrogeological Interpretative report (refer to Section 2.2). Key components of the AIP are:

- Where an activity results in the loss of water from the environment, a WAL is required under the *Water Management Act 2000* to account for this water take
- An activity must address minimal impact considerations in relation to the water table, groundwater pressure and groundwater quality
- Where the actual impacts of an activity are greater than predicted, planning measures must be put in place ensuring there is sufficient monitoring.

For the SBT project, which is a Critical State Significant Infrastructure (SSI) project, the following exemptions are relevant:

- The *Environmental Planning and Assessment Act 1979* (EPA Act 1979) Clause 5.23 Part 1 (g) states that water use approval, water management work approval, or activity approval under the *Water Management Act 2000* is not required for SSI
- The *Water Management (General) Regulation 2018* under the *Water Management Act 2000* Division 2 Clause 21 exempts transport authorities (including Sydney Metro) from the requirement for WAL under the *Water Management Act 2000* if the transport authority, after considering the environmental impact of the activity, is satisfied that the activity is not likely to significantly affect the environment.

The project footprint is also subject to the rules of the Sydney Basin Central Groundwater Source which is covered by the Greater Metropolitan Region Groundwater Source Water Sharing Plan.

The water-sharing plan outlines the recommended management approaches of surface and groundwater connectivity, minimisation of interference between neighbouring water supply works, protection of water quality and sensitive environmental areas and limitations to the availability of water.

The Sydney Basin Central Groundwater Source is a porous hard rock aquifer and is considered to be a "less productive" groundwater source as defined in the AIP.

Key considerations for the Sydney Basin Central Groundwater Source with respect to the level 1 minimal harm considerations for a less productive porous rock aquifer and highly productive coastal aquifer (as defined in the AIP) are:

1. Water table impacts:
   - Less than or equal to 10 per cent cumulative variation in the water table allowing for typical climatic 'post-water sharing plan' variations, 40 metres from any high priority groundwater-dependent ecosystem or high priority culturally significant site listed in the Schedule of the water sharing plan.
   - A maximum of two metres cumulative groundwater level decline at any water supply works.
2. Water pressure impacts:
   - A cumulative pressure head decline of not more than two metres at any supply work.
3. Water quality impacts:
   - Any change in the groundwater quality should not lower the beneficial use category of the groundwater source beyond 40 m from the activity.

Developments conducted on waterfront land and along waterways are regulated by the *Water Management Act 2000* in accordance with the *Guidelines for riparian corridors on waterfront land* (DPI-Water 2012). These guidelines state that waterfront land includes the bed and bank of any waterway and all land within 40 metres of the highest bank of the waterbody. The SBT Works footprint does not include waterfront land as defined by the guidelines.

Controlled activities on waterfront land are administered by DPI Water and include removal of vegetation, earthworks and construction of temporary detention basins. A controlled activity approval must be obtained from DPI Water before commencing the controlled activity, however as noted above, a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the *Water Management Act 2000* is not required for SSI projects.

An overview of the relevant legislation and policy and their project implications is provided in Table 1-3.

Table 1-3: Key legislative and policy documents

Policy	Relevance
Water Management Act 2000 (NSW)	SSI projects are exempt from requiring some water supply works approvals and controlled activity approvals. Transport authorities (including Sydney Metro) are exempt from requirement for water access licence if the transport authority, after considering the environmental impact of the activity, is satisfied that the activity is not likely to significantly affect the environment.

Policy	Relevance
	Aquifer interference activity approval provisions have not yet commenced but are administered under the Act. Water Sharing Plans are administered under this Act.
Water Act NSW (1912)	Administration of water access licences and trade of water licences and allocations.
NSW Aquifer Interference Policy (2012)	Manages the impacts of aquifer interference activities in accordance with the Water Management Act and Water Sharing Plans. Aquifer interference activities must address minimal impact considerations as outlined in the policy. In the event that actual impacts are greater than predicted there should be sufficient monitoring in place.
Water Sharing Plan, Greater Metropolitan Region Groundwater Sources (2011)	Manages the long-term surface and groundwater resources of a defined area. The plan outlines rules for the sharing and sustainability of water between various uses such as town water supply, stock and domestic, industry and irrigation.
NSW Water Extraction Monitoring Policy (2007)	Sets out monitoring requirements with regards to evaluating aquifer interference.
NSW Groundwater Quality Protection Policy (1998)	Sets out monitoring requirements with regards to degradation of groundwater quality.
NSW Groundwater Quantity Management Policy (2001)	Complements the aquifer interference policy.
NSW Groundwater Dependent Ecosystem Policy (2002)	Sets out guidelines to evaluate potential impacts on groundwater dependent ecosystems.
Australian Groundwater Modelling Guidelines (2012)	Sets out guidelines for developing models appropriate to evaluate potential impacts.

1.7 Related documents

The primary documents supporting this plan include:

- M2A Joint Venture (WSP and AECOM) (2020). Sydney Metro Western Sydney Airport – EIS Chapter 14: Flooding, hydrology and water quality
- M2A Joint Venture (WSP and AECOM) (2020). Sydney Metro Western Sydney Airport – EIS Chapter 15: Groundwater and geology
- M2A Joint Venture (WSP and AECOM) (2020). Sydney Metro Western Sydney Airport – EIS Technical Paper 6: Flooding, hydrology and water quality
- ARUP (2020). Sydney Metro Western Sydney Airport – EIS Technical Paper 7: Groundwater. Ref. SMGW-ARP-AEC-GE-REP-002447. October 2020
- Golder and Douglas Partners (2021). Sydney Metro Western Sydney Airport – Groundwater Monitoring Report – Phase 1 – 4 Locations Ref. 19122621-018-R-GWMR12 Rev 0. 24 March 2021
- Cardno (2021). Sydney Metro Western Sydney Airport – Groundwater Monitoring Report Ref. 8002188-CDO-GWMR5-RPT003 – Rev A 8 September 2021
- Western Sydney Airport Station Boxes and Tunnelling works – Hydrogeological interpretative Report, (Document reference: SMWSASBT-CPG-SWD-SW000-GE-RPT-040403)
- Western Sydney Airport Station Boxes and Tunnelling works – Geological interpretative Report, (Document reference: SMWSASBT-CPG-SWD-SW000-GE-RPT-040302).

1.8 Limitations

This report relies on information obtained directly from Sydney Metro, supplied digital databases and the EIS, which includes but is not limited to: groundwater level/pressure, water quality and aquifer parameter data, survey data, laboratory analytical data and engineering borehole logs.

Aquifer parameter testing has been carried out across the alignment, however, data gaps and uncertainty regarding site-specific conditions remain. Where site-specific information is not available, recommendations of parameter values have been made based upon published information, local experience and correlations.

Detailed site investigations will be carried out during detailed design to verify the parameter recommendations made in this report and inform the development of further detailed predictive groundwater models and refine the monitoring program. Such investigations are yet to be complete and will be incorporated in future revisions of this report.

The following key groundwater related data gaps and limitations are noted:

- The influence of structural geology (i.e. faults, folds and dykes) on groundwater flow behaviour and the mobilisation of existing groundwater contamination.
- The influence of permanent water bodies, open drains and similar on groundwater flow behaviour and interaction with groundwater dependant ecosystems (GDEs).
- Geology and groundwater elevation is characterised along the alignment, however, less information exists off-alignment and extrapolation of ground conditions beyond the alignment for the assessment of groundwater levels and drawdown is required which creates uncertainty in the assessments and predictions.
- Changes to groundwater conditions are expected to have occurred as a result of filling on the airport site. Groundwater monitoring data post filling is extremely limited. This affects the reliability of the assessment of groundwater levels.
- Unidentified sources of existing groundwater contamination may be present.
- Limited long-term groundwater level data is available to characterise historical groundwater conditions including temporal variability. This introduces uncertainty around the nomination of representative stable groundwater levels which are used to derive aquifer boundary conditions for numerical modelling as well as design groundwater levels.
- Due to limitations in the testing and water level monitoring records, there is uncertainty in the outcomes of the assessment. This uncertainty extends to the assessment of inflow rates to excavations and the extent and magnitude of drawdown associated with the construction and operation of the WSA SBT. Additional monitoring and assessment is proposed to reduce the extent of this uncertainty.

Monitoring results during construction will need to be compared with predictions to provide early warning of deviation from anticipated responses. Ongoing comparison against observed conditions and refinement of operation of any mitigation systems (if required) may be needed throughout the construction phase to address the uncertainties in aquifer behaviour and response to construction activities.

2 Physical Setting

2.1 Geology

This section provides an overview of the key geological units across the Project based on the available data. For further detail, refer to the relevant Geotechnical Interpretative Report (GIR, SMWSASBT-CPG-SWD-SW000-GE-RPT-040302).

The geological map for Penrith indicates that the Project alignment is located within the Cumberland Basin and Penrith Basin which forms part of the Permian-Triassic Sydney Basin. The Sydney Basin is a structural trough which is the southern continuation of a much longer structural trough including the Sydney, Gunnedah, and Bowen Basins.

The region is dominated by the mid-Triassic Wianamatta Group of sedimentary rocks while the underlying Hawkesbury Sandstone (also of mid-Triassic age) dominates the Blue Mountains to the west. The late Permian-Early to Middle Triassic Narrabeen Group which lies below the Hawkesbury Sandstone can be observed in the gorges of the Blue Mountains. The underlying Permian Illawarra Coal Measures are exposed along the western margin of the Sydney Basin.

Geological long sections for the Project alignment are presented in Annexure B. Anticipated geological units encountered within the SBT Works sites are described in more detail below, and in the Hydrogeological Interpretative Report (HIR, Document reference: SMWSASBT-CPG-SWD-SW000-GE-RPT-040403) and GIR (Document reference: SMWSASBT-CPG-SWD-SW000-GE-RPT-040302).

The three geological units relevant to hydrogeology and groundwater monitoring and management along the alignment are:

Alluvial deposits

Quaternary alluvial deposits are mapped where the Project alignment crosses local waterways such as the lower-lying area of South Creek and its tributaries. The areas of Quaternary Alluvium typically comprise laterally discontinuous layered sequences of silts, clays, and sandy clays with trace carbonaceous inclusions. Localised sandy/gravelly deposits can be found within the alluvial floodplains and in proximity to the existing watercourses and may represent major historical flood events, or creek paleochannels.

Weathered bedrock

Weathered bedrock is characterised by residual soil, extremely weathered rock, and highly weathered rock. Residual soil comprising silty clay produced by surface weathering of the underlying bedrock is expected along the alignment with varying thickness but is generally thicker at the north end of the project. Extremely weathered rock is characterised by very stiff to hard, silty clay, sandy clay, clayey sand. Highly weathered rock however is characterised by frequent fractures and iron-staining which can extend for several metres above the more competent rock. It is frequently friable and generally very low to low strength.

Bedrock

The Bringelly Shale Formation forms the underlying bedrock for the Project alignment and is believed to be about 150m thick below the Project area. It is largely comprised of claystone, siltstone, and laminate, with localised layers of higher strength sandstone. These sandstone beds typically range in thickness from about 0.5 m to 7 m, and often cap the higher hills. Further detail on the geology of the Bringelly Shale Formation is provided in the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403).

2.2 Hydrogeology

2.2.1 Aquifers

The aquifers present across the Project alignment can be broadly characterised as either the bedrock aquifer of the Wianamatta Group fracture bedrock and Hawkesbury Sandstone formation (bedrock aquifer) or Quaternary alluvium deposit aquifers along drainage lines of tributaries associated with the South Creek. Localised perching of groundwater on the extremely weathered bedrock (which due to its clayey nature is likely to be very low permeability) can also be expected.

Fill

Fill in the form of a mixture of sand, gravel and clay is present in places over the SBT Works sites. Fill is typically thin (less than 2 m thick) and is almost invariably above the groundwater table. Fill may be saturated in places where infiltrated water is perched on the underlying residual clay soil.

Quaternary alluvial aquifer

The Quaternary alluvial aquifer overlies bedrock along the main drainage channels and creek lines including South Creek and its tributaries. Quaternary alluvial deposits typically comprise a mixture of gravels, sands, silts and clays. The alluvial deposits within the channels associated with watercourses typically act as zones of discharge of groundwater from the underlying residual soil and rock. Therefore, while the shallow aquifer can be relatively fresh, during droughts the discharge of groundwater from the bedrock aquifer can resulting an increase in salinity in the shallow aquifer and streams such as South Creek (McNally 2009).

Residual soil

Residual soil derived from the in-situ weathering of Bringelly Shale units typically comprise clay and have low hydraulic conductivity. Outside the alluvial channels, the residual soil has shallow topsoil or fill cover.

Recharge to the aquifer is from rainfall and flow along the soil horizon interface, and therefore closer to perched water than true groundwater (McNally 2009). Rainfall is expected to percolate through the residual soil, potentially leaching salt stored in the residual soils into local waterways, rather than recharging to the underlying Bringelly Shale.

Bedrock aquifers

The bedrock units of the Wianamatta Group (Bringelly Shale, Minchinbury Sandstone and Ashfield Shale) and underlying Mittagong Formation and Hawkesbury Sandstone form heterogeneous fractured rock aquifers where groundwater flows occur within defects within the rock mass. The bedrock aquifers in the Wianamatta Group are typically semi-confined to confined in low lying areas where the residual soils are rich in clay and can act as a confining layer.

The origin of the saline water in the shales and residual soils is thought to be due to windblown aerosols, rather than historically trapped sea water. The salt accumulates by evapotranspiration, and infiltrates into the residual soils, and the underlying shales of the bedrock aquifer (McNally 2009).

Bringelly Shale is the upper rock unit beneath the tunnel alignment. It comprises shale with sandstone bands. Defects including faults, dykes and shear zones are present. Permeability of the intact shale is low with flow occurring through defects associated with bedding, joints, shear zones and fractures. On exposure, the shale swells, and its exposed surface deteriorates with time. The permeability of the sandstone beds may be significantly greater than the intact shale.

As a result of the interbeds of sandstone within the shale, vertical permeability of the rock mass is expected to typically be lower than the horizontal permeability.

2.2.2 Groundwater recharge and discharge

Recharge to the alluvial deposit aquifer is primarily via rainfall recharge. Some recharge from watercourses may occur during periods of high flow and from small farm dams within the area. The watercourses are however expected to act predominantly as the line of groundwater discharge.

Groundwater levels are expected to mound between watercourses with vertical infiltration downward through the residual clay cover and lateral migration from the elevated areas towards the watercourses via the Bringelly Shale.

Due to the low permeability of the residual soil cover, groundwater recharge to the underlying shale aquifers is expected to be low perhaps between 1 and 2 % of the average annual rainfall.

An increase in development around the area is likely to reduce the direct recharge from rainfall.

2.3 Groundwater levels and flow

Groundwater flow is interpreted to be controlled by rainfall infiltration and discharge along the watercourses. As a result, the groundwater flow direction is expected to generally follow topography towards the main drainage channels in a northerly and easterly direction towards Cosgroves Creek, a southerly and easterly direction towards Badgerys Creek and South Creek and westwards towards Duncans Creek. Groundwater levels are typically within 5 m of the ground surface though groundwater is deeper than 5 m depth in the higher ground away from the watercourses.

Groundwater level contours have been interpreted based on measured levels, watercourses and topographic contours (Figures 2-1 to 2-4). Groundwater flow is complex, and the interpretation is considered to provide a general indication of the broad pattern of existing groundwater flow, with local-scale influences not captured.

Downward head gradients are interpreted to be present away from the watercourses linked to infiltration of rainfall through the residual soil to the deeper rock aquifer. Upward gradient may be present at the water courses where the potentiometric pressures in the deep bedrock are above the base of the creek/watercourse level. This has been reported near the west bank of Claremont Creek (refer Section 13.4.1 of the HIR) and is noted to cause of periodic increases in salinity in South Creek due to the discharge of saline water from the Bringelly shale aquifer (McNally 2009).

More detailed discussion on groundwater level and flow direction along the SBT Works alignment are provided in the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403).

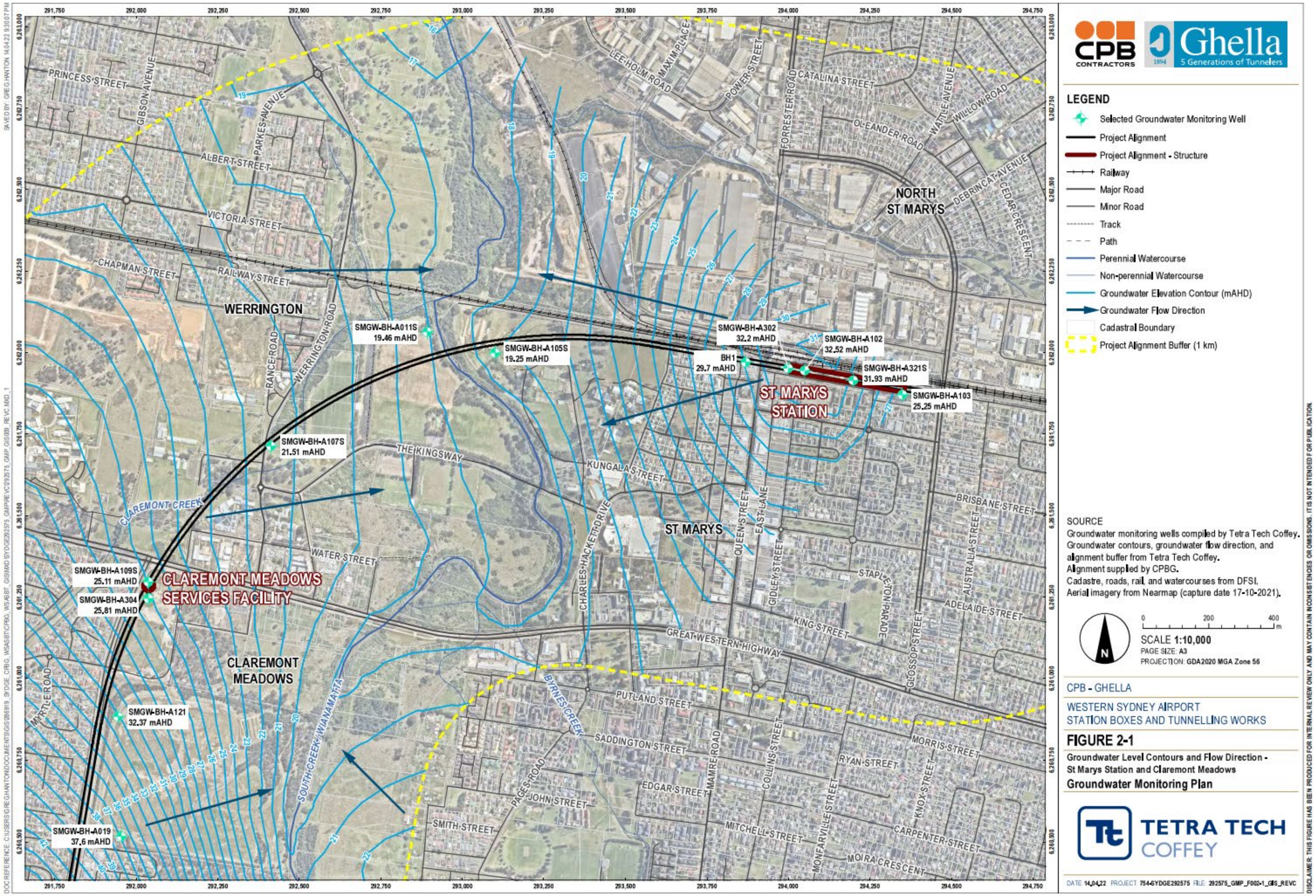

Figure 2-1: Groundwater level contours and flow direction – St Marys Station and Claremont Meadows

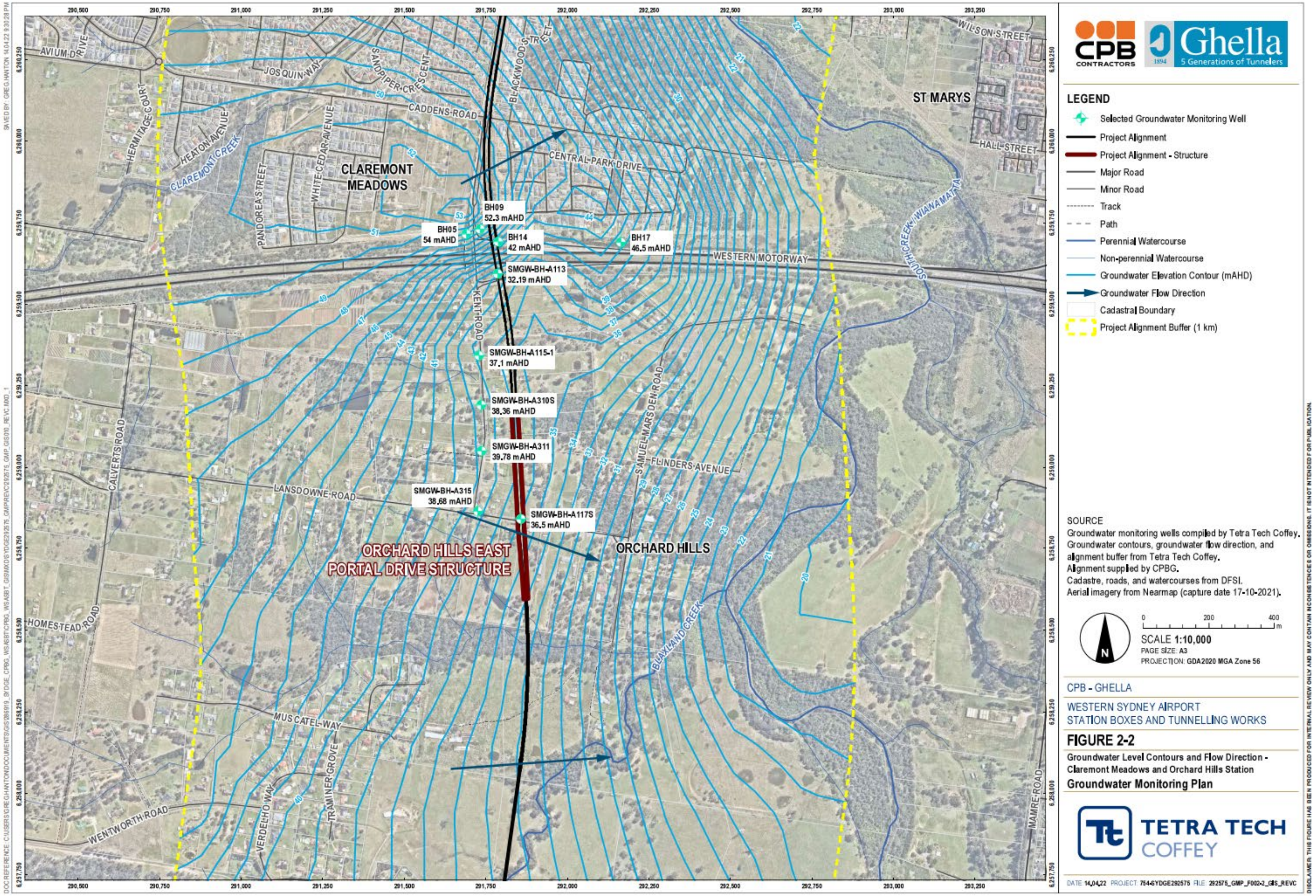

Figure 2-2: Groundwater level contours and flow direction – Claremont Meadows and Orchard Hills Station

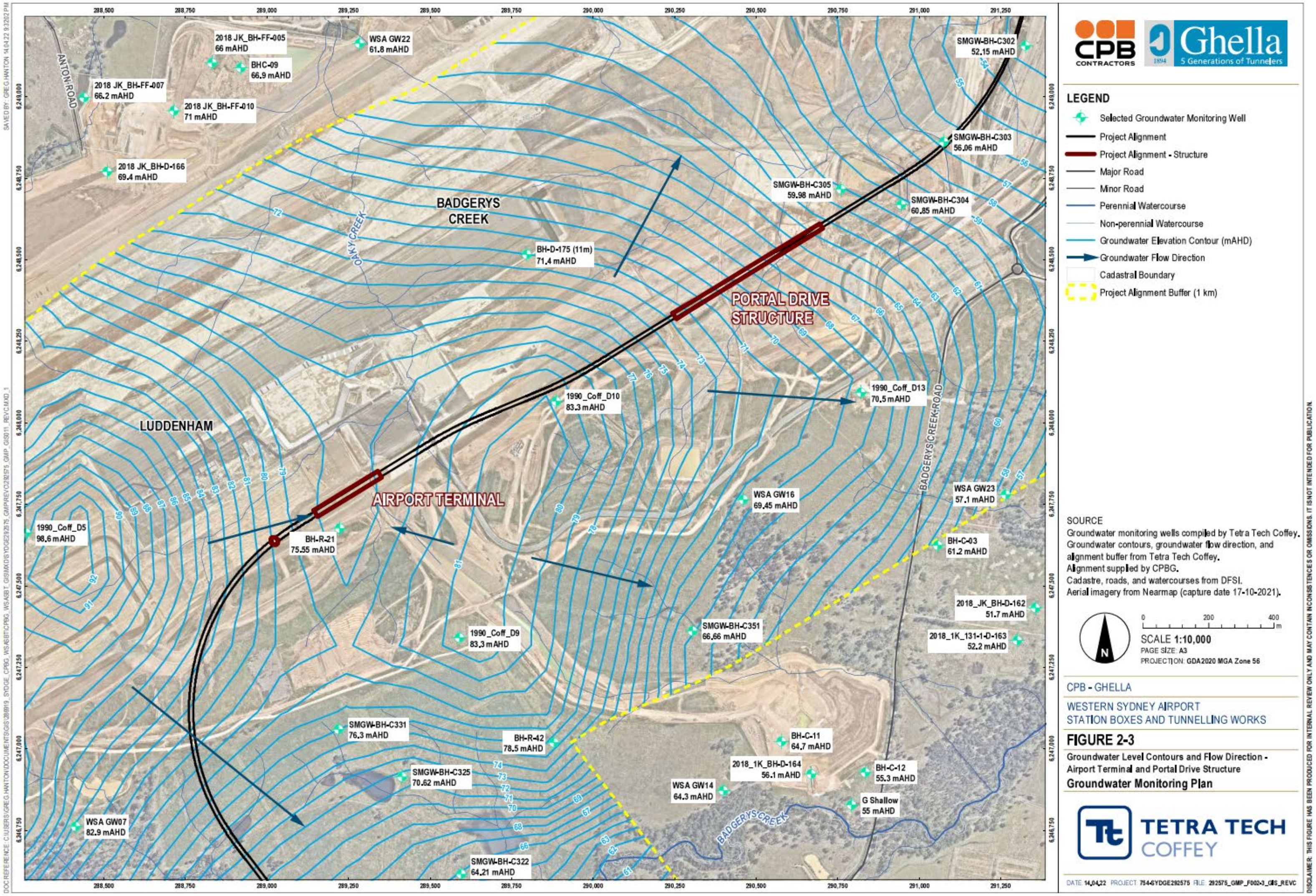

Figure 2-3: Groundwater level contours and flow direction – Airport Terminal and Portal Dive Structure

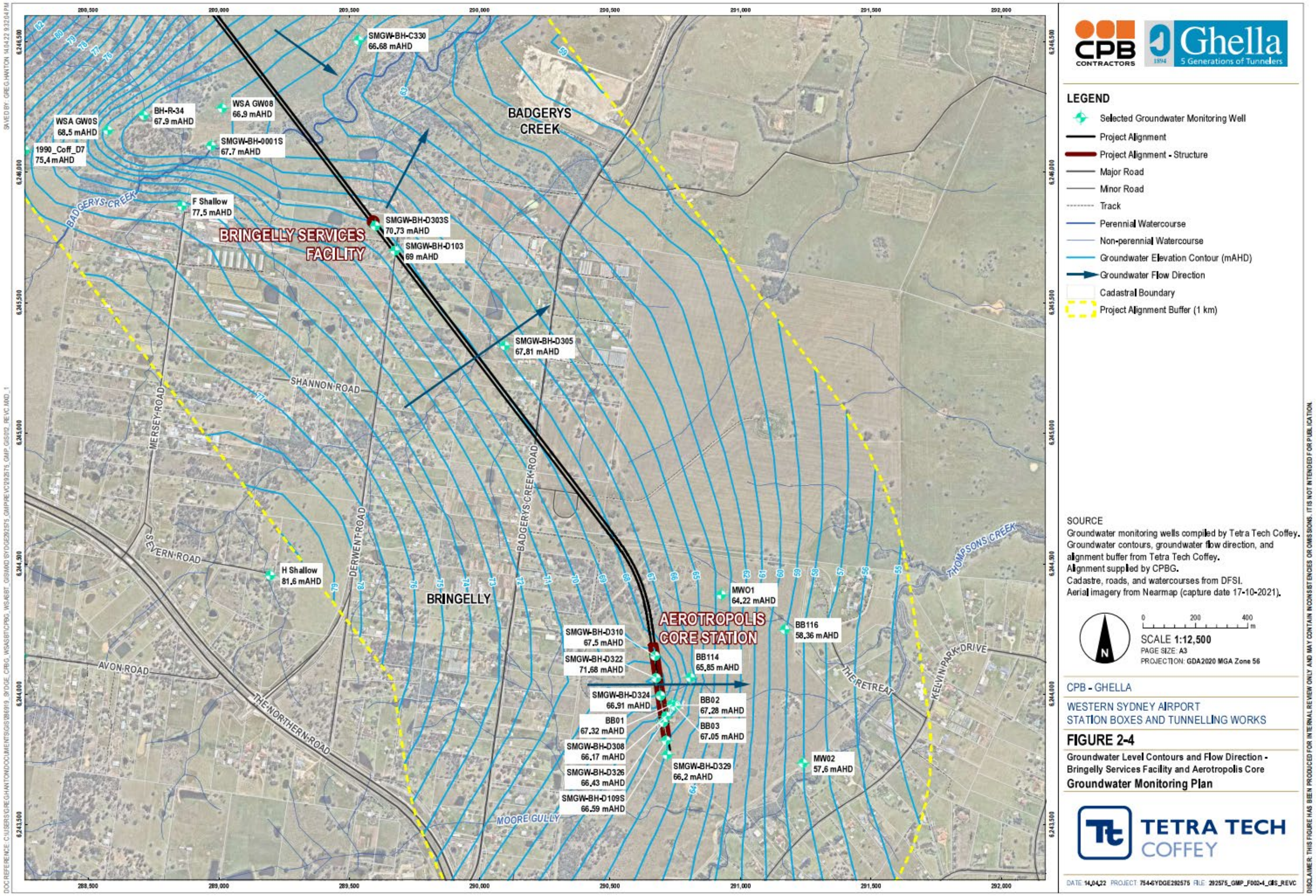

Figure 2-4: Groundwater level contours and flow direction – Bringelly Service Facility and Aerotropolis Core

2.4 Groundwater quality

Groundwater quality along the SBT Works alignment is presented in detail in the HIR (Document reference: SMWSASBT-CPG-SWD-SW000-GE-RPT-040403), with a focus on areas where there is the potential for significant interaction with groundwater and where potentially problematic groundwater quality conditions have been identified. All currently available groundwater quality data is provided in Annexure D.

General groundwater quality along the SBT Works alignment is summarised in Table 2.1, with the summary statistics provided separately for the shallow (predominantly residual) and bedrock aquifers. Note that data from wells screened across both the residual and bedrock aquifers is not included in the summary, but has been considered in the discussion below and included in the water quality summary provided in Annexure D.

Table 2-1: General groundwater quality summary

Parameter	Units	Bedrock	Alluvial or Residual	Bedrock	Alluvial or Residual	Bedrock	Alluvial or Residual	Bedrock	Alluvial or Residual
		No. samples		Minimum		Maximum		Average/ Comment	
TDS (field)	mg/L	13	16	3,500	6,400	22,000	22,000	14,638	12,831
EC (lab)	uS/cm	102	47	615	876	32,700	32,000	18,265	15,943
pH field	pH units	63	4	5.8	6.2	7.8	6.8	6.8	6.5
pH lab	pH units	98	47	5.8	4.9	12.2	8.5	7.7	6.8
ORP	mV	36	-	3	-	337	-	WSI wells only	-
Sulfate as SO4[1]	mg/L	119	57	<1	8	2,200	2,100	587	535
Chloride	mg/L	120	57	111	65	19,000	15,000	6,664	5,022
Calcium[1]	mg/L	122	57	4	11	1,500	470	358	116
Alkalinity (Total)	mg/L	118	55	27	3	2,490	1,200	762	345

1. The summary includes total sulfate and total chloride concentrations as filtered concentrations were similar when analysed for in the same samples

The general characteristics of groundwater across the SBT Works area are:

- Salinity is brackish, with the average electro-conductivity (EC) of groundwater generally exceeding 10,000µS/cm. Groundwater in the residual aquifer is on average slightly less saline than in the bedrock aquifer. The lowest salinity reported (<1,000uS/cm) were reported near South Creek and Claremont Creek between St Marys and Claremont Meadows, indicating that fresh surface water bodies discharge to shallow groundwater in some areas.
- Groundwater pH is typically slightly acidic to neutral, with field pH ranging from 5.5 to 8.4 and laboratory pH ranging from 4.9 to 12.2. Strongly alkaline groundwater (pH>10) has consistently been reported in one location (SMGW-BH-A122) at tunnel depth to the south of Claremont Meadows and the Gipps St Landfill.
- Sulfate concentrations do not always correlate with groundwater EC, which is attributed to the presence of organic compounds, including hydrocarbon contamination, at several locations along the alignment. The lowest relative sulfate concentrations were reported in groundwater bores at the northern end of the alignment at St Marys, Claremont Meadows, Orchard Hills and to a lesser extent at WSI.
- Groundwater is typically of sodium-chloride water type, with increased bicarbonate in a number of wells where organic impact has either been identified or is suspected.

There are several suspected or known contamination source areas on or adjacent to the SBT Works alignment within the areas where groundwater drawdown during construction is predicted to be >1 metre. Sites that have been identified as having the potential to result in contamination of groundwater based on a review of the available dataset, or where there is no baseline date, are discussed in detail in Section 15 of the HIR.

Key sites include:

- Former Dry Cleaner – 1-7 Queen St, St Marys
- Harris Street construction laydown area, St Marys
- Industrial area Queen and Phillip Streets, St Marys
- St Marys Plaza
- Current and suspected historical Service Stations to the west of Claremont Meadows Facility
- Gipps Street Landfill
- 34-38 Lansdowne Road, Orchard Hills
- 106-112 Kent Road, Orchard Hills
- 94-98 Kent Road, Orchard Hills
- Former OTC site, Aerotropolis Core Station.

Data gaps in the available groundwater information have been identified and are discussed in the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403) and Section 5.2.1. Detailed site investigations (DSI) are proposed to address the data gaps relating to groundwater quality and to provide an appropriate baseline assessment of existing groundwater conditions (discussed in Section 5.2).

2.5 Groundwater users

A search of the Bureau of Meteorology's Groundwater Explorer database (BOM, 2021) identified 42 registered groundwater bores within 1 km of the SBT Works alignment. Of the 42 registered bores within 1 km of the SBT Works alignment, only two are registered with an extractive use (Table 2-2). All other registered wells are registered for groundwater monitoring purposes and are not considered further.

The two extractive use wells are registered for industrial use and are reported to be over 200 m deep. These wells are expected to access groundwater from the bedrock aquifer which is consistent with the understanding that shallow groundwater typically has a higher salinity that would not be desirable for most extractive uses. Details of the two extractive use wells are summarised in Table 2-2, with the locations shown on Figure C-1, Annexure C.

Table 2-2: Registered groundwater wells with extractive use

Bore ID	Easting	Northing	Drilled Date	Depth	Distance to alignment	Registered Use
GW105382	291651	6255672	19/04/2004	252 m	120 m east	Commercial Industrial
GW105054	291424	6256068	2/10/2002	210 m	152 m west	Commercial Industrial

In addition to registered groundwater users, consideration has also been given to constructed farm dams in areas where groundwater levels approach the ground surface. It is possible that in these areas farm dams may be partly supported by shallow groundwater and construction induced drawdown beneath these dams could potentially result in reduced dam water levels. These conditions may particularly exist around Orchard Hills East portal drive structure and the Bringelly services facility (refer Figures C-3 and C-5, Annexure C).

2.6 Groundwater dependent ecosystems

Groundwater dependent ecosystems (GDEs) are receptors that rely wholly or partially on groundwater to provide all or some of their water needs. GDEs relevant to the SBT Works can broadly be categorised as:

- Terrestrial GDEs: Ecosystems reliant on the subsurface presence of groundwater (i.e. vegetation that is accessing the water table and/or capillary fringe)
- Aquatic GDEs: Ecosystems reliant on the surface expression of groundwater (i.e. wetlands and baseflow fed watercourses).

Terrestrial GDEs are ecosystems with vegetation that rely on the availability of shallow groundwater, which is within reach of the root zone. Mature, large trees are likely to have the deepest root systems and are the most likely vegetation type in a given ecosystem to access groundwater. Two classifications of terrestrial GDEs are recognised:

- Obligate groundwater dependency – where vegetation (or some vegetation in a wider ecosystem) sources most, or all of its water requirements from groundwater or the capillary fringe.
- Facultative groundwater dependency – where groundwater may be used periodically either only when it is available, or only when it is required.

Subterranean GDEs have not been mapped in the vicinity of the SBT Works and as such are not considered further. There are also no Ramsar or nationally important wetlands within the study area.

A desktop search of groundwater dependent ecosystems within a 1 km buffer of the SBT Works identified several aquatic and terrestrial ecosystems listed as having moderate or high potential for groundwater dependence (BoM, 2021). Data sources and the assessment process used to identify potential GDEs are detailed in the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403).

A detailed description of the suspected aquatic and terrestrial GDEs in the vicinity of the SBT Works is provided in Annexure C, along with figures presenting an overview of the mapped locations.

3 Environmental Impacts

3.1 Construction groundwater inflow and drawdown assessment

The assumed station and facility construction details are outlined in the HIR (Document reference: SMWSASBT-CPG-SWD-SW000-GE-RPT-040403). The design of various excavations has been amended since tender, with secant pile walls proposed instead of diaphragm walls at both the Claremont Meadows and Bringelly Service Facilities. The effect of this design modification is currently being assessed, and this GWMP will be reviewed and revised as required should the assumed drawdown extents significantly change from those assumed below.

3.1.1 St Marys Station

The existing groundwater level at the station in the main aquifer is assessed to be 33 mAHD. This level was adopted for the assessment of drawdown impacts associated with construction. A higher level of 34 mAHD was adopted for the assessment of potential sustained groundwater inflow due to periods of sustained high rainfall.

For construction groundwater assessment, it is assumed that groundwater level will be controlled to 18.5 mAHD within the excavation allowing for excavation to facilitate foundation preparation and casting of the base slab.

South Creek is present 800 m to the southwest and a minor tributary of South Creek is present 420 m to the north.

Based on the borehole logs Bringelly Shale is interpreted to be present at the bulk excavation level over the lower 16 m of the excavation. Perched groundwater (at the shallow level than the recorded groundwater level within shale) is anticipated in the shallow soil profile at higher elevations than the main aquifer. The groundwater inflow assessment assumed that such shallow groundwater would be address separately by surface drainage or cutoff trenching.

A sustained inflow of 0.2 L/s is estimated for the completed excavation. Higher inflow may occur initially depending upon the rate of excavation. Drawdown associated with the excavation is assessed to occur for a distance of 420 m from the excavation. As a result, the excavation is considered unlikely to influence the nearby watercourses.

3.1.2 Claremont Meadows Facility

There are currently no modelled drawdown predictions available for the Claremont Meadows facility. The depth to groundwater has been measured within 2.5 m of the ground surface in places and some dewatering during construction is expected.

Secant walls will be used during construction, which will likely result in a higher magnitude of groundwater drawdown propagating from the construction site.

Claremont Creek is approximately 140 m to the northwest of the facility. Based on the parameters adopted and approach as outlined in the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403), and making allowance for the presence of Claremont Creek, sustained inflow to the excavation is assessed to be 0.25 L/s from the base of the shaft during construction with an extent of influence of 350 m to the east and 1 m drawdown of the water table up to 250 m from the excavation. The magnitude of groundwater level drawdown towards the north, where higher hydraulic conductivity alluvial sediments exist, is expected to be limited.

Initial inflow would be greater in the short term but is expected to stabilise within the construction timeframe.

3.1.3 Orchard Hills Station

The Orchard Hills Station excavation is anticipated to extend to 27 mAHD allowing some over-excavation for the preparation of the floor for the casing of the base slab. A ramp to the ground surface will be constructed to the south and will provide construction access and will form part of the metro rail system. On completion, the reference design nominates undrained conditions are to be achieved for the station though the ramp would remain drained.

An ephemeral watercourse is present to the north of the station. This is treated as having little influence on groundwater levels. It is interpreted to act as a zone of groundwater discharge under pre-development conditions.

Based on the parameters outlined in the HIR the sustained seepage to the station excavation and dive structure is assessed as 15 m^3/d (0.17 L/s) and the extent of the impact is assessed to be within 350 m of the station. This zone of influence does not extend as far as South Creek to the west so no adverse impacts on South Creek are predicted. No existing groundwater bores have been identified within the assessed zone of influence.

Drawdown related settlement is assessed to be less than 5 mm (allowing a drained modulus of 35 MPa and a Poisson's Ratio of 0.3 for depressurisation of up to 5 m of residual soil).

Should the station be drained during operation the extent of the impact is as described above. Groundwater ingress to the drained station would need to be addressed possibly involving treatment and release to the surface water system. This would increase the requirements of the system which would otherwise need to deal with the seepage to the drained dive structure.

3.1.4 Bringelly Services Facility

Secant walls will be used during construction of the Bringelly Service Facility, which will likely result in a higher magnitude of groundwater drawdown propagating from the construction site than initially predicted based on previous assumed use of solider piles or a diaphragm wall.

A pre-development groundwater level of 69 mAHD was adopted for assessment of drawdown impact and construction groundwater seepage inflow based on the records from monitoring location SMGW-BH-D303S.

A sustained construction groundwater seepage inflow of 0.3 L/s is assessed during construction with a drawdown response limited to 400 m from the shaft. Drawdown greater than 1 m is assessed to occur within 250 m of the excavation, however modelling is currently being undertaken to assess how the use of secant piles is likely to affect drawdown.

3.1.5 Aerotropolis Core Station

The Aerotropolis Cores Station is approximately 200 m to the northwest of Thompsons Creek. Groundwater levels recorded at location SMGW-BH-D326 showed a 1.1 m rise in response to a heavy rainfall event in March 2021 with subsequent recovery to a level of 66.8 mAHD. Based on these measurements a pre-development groundwater level of 67 mAHD was adopted for assessment of construction groundwater inflow and drawdown response.

Borehole logs for the area show thin residual soil cover over Bringelly Shale.

A sustained construction groundwater seepage inflow of 0.2 L/s is assessed, with a drawdown response limited to 450 m from the shaft. Drawdown greater than 1 m is assessed to occur within 300 m of the excavation.

3.2 Environmental impacts

Potential impacts resulting from the SBT Works before the implementation of mitigation measures were identified and assessed as part of the preliminary groundwater impact assessment as detailed in the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403).

The SBT Works will interact with the groundwater environment during the construction and operational phases. The construction methods and permanent design adopted for the underground structures directly influences how the SBT Works will impact groundwater systems and sensitive receptors.

Table 3-1 summarises key risks posed by the SBT Works to the groundwater environment during construction.

Table 3-1: Key potential construction stage groundwater risks

Issue	Risk
Change in groundwater level	Reduced availability for groundwater-dependent ecosystems (aquatic and terrestrial)
	Reduced availability for existing extractive groundwater users
	Impact on third party structures (property, utilities, and the environment) due to consolidation settlement
	Mounding and barrier effects upstream of buried structures (stations, dive structures) and the tunnel.
Change in groundwater quality	Mobilisation of existing groundwater contamination into previously unaffected areas resulting in unacceptable risk to sensitive receptors/third parties
	Mobilisation or generation of groundwater having quality that is adverse to underground structures
	Degradation of groundwater quality by drawing saline water from the deep bedrock aquifer into possibly fresh to brackish shallow (alluvial) aquifers
	Contamination of groundwater due to surface spills and leaks
	Acidification of groundwater due to oxidation of acid sulphate soil and rock
Disposal of groundwater	Management of groundwater seepage, including potentially contaminated groundwater, into construction excavations or permanent structures resulting in unacceptable impacts at the point of discharge

3.2.1 Registered groundwater users

Extractive use groundwater bores

Extractive groundwater users require consideration of both potential level and quality impacts associated with the SBT Works.

The SBT Works is required to comply with Table 1 – Minimal Impact Considerations for Aquifer Interference Activities of the NSW Aquifer Interference Policy which specifies that the SBT Works must not result in a cumulative water level decline of more than 2 m at any water supply work (groundwater bore).

Two extractive use bores were identified in close proximity (between 120 m and 150 m) to the project alignment. The SBT Works design includes only above-ground infrastructure in this area and no groundwater level or quality impacts are expected as a result of project activities.

Groundwater modelling is currently underway to quantify the magnitude of drawdown at these two bores, if any.

Farm dams

It is possible that if dams are constructed in low-lying areas, or where groundwater levels are shallow (i.e., within 2 mbgl), they may have a level of connectivity with the underlying aquifer. Where this occurs, temporary groundwater drawdown could result in temporarily reduced surface water levels in some farm dams.

Make good arrangements could be considered as a contingency mitigation measure during construction if impacts were observed.

3.2.2 Mobilisation of groundwater contamination

Based on the information available areas of groundwater contamination that may require management and mitigation during construction are summarised in Table 3-2 below.

Table 3-2: Summary of groundwater contamination

Location	Groundwater contamination
St Marys Station	Waterproofer, former service station, dry cleaners, former wreckers, workshop, bus depot, plastics manufacturer (TPH, PAHs, chlorinated hydrocarbons, PFAS, metals, miscellaneous organic compounds)
Claremont Meadows Facility	Gipps Street Landfill (potential landfill gas and dissolved methane)
Orchard Hills Station	Former agricultural activity (pesticides and metals) and potential unlicensed waste disposal (TPH, VOC, metals)
Airport Dive Portal	-
Airport Terminal Station	-
Bringelly Services Facility	Unknown source (metals, nutrients)
Aerotropolis Core Station	UST, transformer, substation, fire hydrants and pumphouse identified onsite (TPH, PFAS)

There are data gaps with respect to the nature and extent of groundwater contamination associated with identified sources or suspected sources. Additional assessment is proposed as outlined in Section 5.2 to inform where monitoring and management may be required during construction.

As discussed in Section 15 of the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403) groundwater contamination is present at the former dry cleaner to the west of the St Marys Station, although the lateral and vertical extent of impact is to be delineated. Preliminary groundwater assessment indicates contamination from this site is unlikely to impact on the quality of groundwater seeping to the station excavation during the construction period.

Based on available information, no active mitigation is proposed to manage groundwater contamination, however management required will need to be reviewed, and revised if necessary, once the DSI and baseline assessments have been completed.

3.2.3 Groundwater dependent ecosystems

The SBT Works are expected to interact with the groundwater environment in places along the alignment where excavation is planned below the water table.

Key potential impacts posed by the SBT Works to GDEs during construction and operation are summarised in Table 3-3.

Table 3-3: Key groundwater potential impacts

Issue	Potential impact
Change in groundwater level	Reduced availability for GDEs (aquatic and terrestrial).
	Acidification of groundwater due to oxidation of acid sulfate soil and rock.
Change in groundwater quality	Mobilisation of existing groundwater contamination or saline groundwater into previously unaffected areas resulting in unacceptable risk to sensitive receptors.

A risk-based assessment approach has been adopted to assess the potential impacts to identified GDEs along the SBT Works alignment. The assessment approach adopts a GDE risk ranking matrix that was established for the project (refer to Section 18.4.2 of the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403)). The risk ranking matrix considers both groundwater level and quality changes, their magnitudes and duration.

This approach is intended to identify potential impacts that would be considered unacceptable or undesirable and allows for alternative engineering design options to be developed, or suitable mitigation measures to be implemented prior to construction commencing.

Aquatic GDE impact assessment

A preliminary assessment of impacts to aquatic GDEs was undertaken in Section 18.4.3 of the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403). The assessment considered the potential influence of the SBT Works on the following aquatic GDEs:

- South Creek
- Badgerys Creek.

The groundwater inflow and drawdown assessment (Section 16 of the HIR) has concluded that the predicted zone of 1 m groundwater drawdown is unlikely to extend to within 50 m of either South Creek or Badgerys Creek. Based on this assessment there is a negligible risk of impact to aquatic GDEs during construction based on the current engineering design and inflow assessment.

Refined inflow and groundwater level drawdown modelling will be conducted prior to construction. Model outputs, particularly around Orchard Hills station and the Bringelly Services Facility, will be reviewed to consider lower magnitude drawdown of between 0.1 and 1 m, which may propagate further eastwards towards South Creek and Badgerys Creek.

The 0.1 m drawdown contour is likely to extend east of the Bringelly services area beneath a section of Badgerys Creek which is considered to be groundwater dependent in places. Further assessment of potential impacts to the aquatic ecosystem of Badgerys Creek should be undertaken once groundwater modelling has been completed.

Mitigation measures are currently not proposed for aquatic GDEs but this may be revised in future versions of this document.

Terrestrial GDE impact assessment

The design phase groundwater drawdown estimates presented in the EIS have been adopted for the GDE impact assessment until construction phase modelling and drawdown estimates are available.

The magnitude of groundwater level drawdown around the rail tunnels and the cross passages during construction is expected to be relatively minor due to the relatively short construction duration and the low hydraulic conductivity of the Bringelly Shale. Therefore, the assessment has been limited to the areas of predicted groundwater level drawdown around dewatered excavations, such as station boxes, portals and other major infrastructure.

A summary of the terrestrial GDE impact assessment presented in the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403) is provided in Table 3-4.

Table 3-4: Terrestrial GDE impact assessment summary

SBT Works site	Terrestrial GDE	Assumed GDE type	Potential impact	Risk ranking
Claremont Meadows Facility	Cumberland Shale Plains Woodland east of Gipps Street	Facultative	Unquantified groundwater drawdown (potentially up to 2m) through secant piled walls, estimated for more than 6 months	Moderate
	Claremont Creek riparian zone	Unknown (potentially obligate)	Unquantified groundwater drawdown unlikely to significantly alter levels in alluvial sediments	Minor

SBT Works site	Terrestrial GDE	Assumed GDE type	Potential impact	Risk ranking
Orchard Hills Station	Cumberland Shale Plains Woodland north and east of the station	Facultative	Temporary drawdown in excess of 2 m across large area, persisting for at least 6 months.	Moderate
	Cumberland River Flat Forest south of Lansdowne Road	Facultative	Temporary drawdown in excess of 1 m across large area, persisting for at least 6 months.	Minor
	Cumberland River Flat Forest in South Creek riparian zone	Facultative	Temporary drawdown in excess of 1 m across large area, persisting for at least 6 months.	Minor
Bringelly Services facility	Cumberland Shale Plains Woodland 30 m south of the construction zone	Facultative	Temporary drawdown of approximately 5 m predicted across 1.3 ha stand on private property, persisting for at least 6 months.	Moderate
	Cumberland Shale Plains Woodland 300 m north of the construction zone	Facultative	Temporary drawdown of up to 2 m is predicted to extend beneath the southern edge of the woodland, persisting for at least 6 months. Proposed construction using secant will likely increase the magnitude of groundwater drawdown towards Badgerys Creek.	Moderate
Aerotropolis core	Cumberland River Flat Forest along Thompson Creek riparian zone	Facultative	There are no mapped terrestrial GDEs that fall within the predicted 1 m drawdown contour extending around the station box.	Negligible

4 Environmental control measures

The need for active control measures is based on the identification of where SBT Works may result in an unacceptable risk to a sensitive and relevant groundwater receptor. Mitigation and management measures are then implemented to control impacts to within acceptable levels.

Additional site investigations and baseline assessment is being undertaken to refine the need for and approach to groundwater mitigation and management. The effectiveness of any measures implemented will be validated through the groundwater construction monitoring program (Section 6).

4.1 Inflow control

Groundwater control measures and preliminary inflow assessments across the SBT Works alignment are summarised in Table 4-1. The assessments indicate that inflows will be quite low, with local defects potentially resulting in short term higher flows. Localised grouting may be implemented as a control measure where required.

Table 4-1: Summary of groundwater control

No	SBT Work	Groundwater Control	Preliminary Inflow Assessment
1	Running Tunnels	Undrained	-
2	Cross Passages	Undrained	-
3	Cross Passages with Sump	Undrained	-
4	Stub Tunnel	Undrained	-
5	St Marys Station Excavation	Drained	0.2L/s
6	Claremont Meadows Service facility Excavation	Drained	0.25L/s
7	Claremont Meadows Service Structure	Undrained	-
8	Orchard Hills East Portal Structure	Undrained	-
9	Orchard Hills East Portal Excavation	Drained	0.17L/s
10	Orchard Hills East Station Excavation	Drained	
11	Orchard Hills East Dive Structure	Drained	
12	Airport Dive Structure	Undrained	-
13	Airport Dive Excavation	Drained	0.2L/s
14	Airport Portal Excavation	Drained	
15	Airport Terminal Station and Shaft Excavations	Drained	0.2L/s
16	Bringelly Services Facility Excavation	Drained	0.3L/s
17	Bringelly Services Facility Structure	Undrained	-
18	Aerotropolis Core Station and Shaft Excavations	Drained	0.2L/s

4.2 Groundwater contamination

The risk of adverse groundwater related impacts due to mobilisation of contamination during construction is considered to be low based on the available data, and so no active groundwater mitigation is proposed. Proposed control measures for groundwater contamination therefore consist of management via monitoring to assess whether existing conditions change such that there is an adverse change in risk profile.

Additional site investigations and baseline assessments are being undertaken to refine the need for and approach to groundwater mitigation and management. The need for active control measures will be based on the identification of where project activities may result in an unacceptable risk to a sensitive and relevant groundwater receptor. Where contamination is identified that may require active management and/or mitigation, then measures will be implemented to control impacts to within acceptable levels.

The effectiveness of any measures implemented will be validated through the groundwater construction monitoring program (Section 6).

4.3 Water Treatment

Groundwater inflows, TBM process water, and washdown water from construction activities will be treated using the dedicated water treatment plants (WTPs) located at St Mary's, Claremont Meadows, Orchard Hills, Bringelly, and Aerotropolis. Following treatment, the WTPs will discharge effluent either to receiving waterways or to trade waste (sewer) depending whether environmental criteria for discharge to waterways are achieved. On-site beneficial reuse of treated effluent is also considered a viable option to support dust suppression measures.

All WTPs will include a minimum seven-step treatment process that has been designed to significantly improve water quality, prior to the discharge of treated effluent into receiving waterways.

Each site will include an approximately 20,000 litre storage tank that will be used to store treated water prior to discharge. The treated water storage tanks will include a "high water" level trigger that will activate pumped discharge from the storage tank to receiving waterways via existing stormwater connections or proposed conveyance structures. Discharge will cease once the "low water" trigger level is reached.

Details of the proposed water treatment processes and the resulting effects on water quality are summarised in Table 4-2, noting that treatment to reduce salinity is not proposed, and saline water will need to be discharged as trade waste if not acceptable for release to waterways.

Table 4-2: Minimum Water Treatment Plant Processes

Site Location	WTP Process
Primary Solids Removal	First order reduction of suspended solids and suspended contaminants.
Flocculation / Coagulation	Second order reduction of turbidity suspended solids, and suspended contaminants. Coagulant aids may be used to improve softening of water and enhance reduction in concentrations of dissolved solids / contaminants.
Clarification	Third order reduction of turbidity suspended solids, and suspended contaminants. Combination softening-clarification units may improve and enhance reduction in concentrations of dissolved solids / contaminants.
Media Filtration	Fourth order reduction of turbidity and suspended solids, and suspended contaminants. May be used with softening process to reduce concentrations of dissolved solids / contaminants.

Site Location	WTP Process
Breakpoint Chlorination	Reduce concentrations of ammonia.
Activated Carbon Filtration	Remove organic contaminants, hydrocarbons, chlorine, PFAS, chloramines, nitrate, and improve colour and odour.
pH Correction	Adjustment of pH to appropriate discharge limits.

4.4 GDE Mitigation Measures

Moderate potential for adverse effects has been identified at several locations along the project alignment (Claremont Meadows facility, Orchard Hills station, and Bringelly services facility) where dewatering is likely to cause groundwater levels to be temporarily drawn-down below the root zone of facultative terrestrial GDEs for a period of greater than six months.

In many cases these facultative GDEs may be unaffected by short term dewatering where there are sufficient alternative sources such as rainfall and soil moisture. However, given the high ecological value of the Cumberland Shale Plain Woodland and Cumberland River Flat Forest, and in the absence of site-specific assessment of groundwater dependence, a conservative assessment has been adopted assuming that any temporary decline in tree health would be considered unacceptable.

Table 4-3 summarises the recommended monitoring and mitigation measures to minimise potential impacts (such as declining tree health or dieback) to terrestrial GDEs assessed as having moderate risk rankings. Monitoring requirements are detailed further in Section 6.

Table 4-3: Groundwater assessment, monitoring and mitigation measures – terrestrial GDEs

Measure	Proposed action	Description
Assessment	Groundwater drawdown assessment	Refinement of the potential zone of terrestrial GDE impact based on numerical groundwater modelling and estimate of the duration of dewatering.
	Pre-construction groundwater level monitoring	Additional groundwater monitoring wells will be installed in the vicinity of suspected GDEs. These additional wells will provide an improved assessment of potential groundwater dependence and will be used to determine baseline conditions. Wells will also be used to assess the zone of drawdown during construction (Section 6).
	Pre-construction vegetation survey	Details on vegetation surveys are provided in the Flora and Fauna Management Sub-Plan.
Monitoring	Groundwater level and quality monitoring	A program of groundwater level and quality monitoring will be implemented during construction, and for an agreed period of operation while groundwater levels recover. Levels should be monitored at least weekly (monitoring via data loggers at six hourly intervals is proposed as detailed in Section 6.1.3) Periodic review of monitoring results will consider whether drawdown is progressing in line with modelled estimates or if additional areas of terrestrial GDE may require management.
	Tree health monitoring	Periodic tree health monitoring is detailed in the Flora and Fauna Management Sub-Plan
Mitigation system	Manual tree watering	Where the tree health monitoring program identifies signs of declining tree health during construction, and groundwater monitoring confirms a reduced

Measure	Proposed action	Description
		water table, manual tree watering events should commence until tree health recovers, or until groundwater levels recover post-construction. Manual watering events will continue during low rainfall periods until tree health recovers, or groundwater levels recover to levels that return supply to the root zone. Further detail is provided in the Flora and Fauna Management Sub-Plan.

The monitoring and mitigation measures presented in Table 4-3 are considered appropriate and effective to manage the potential impacts of temporary groundwater level drawdown as they are currently understood. Other mitigation, monitoring and contingencies measures are detailed in the Flora and Fauna Management Sub-Plan.

5 Groundwater monitoring

The following sections outline the existing and proposed groundwater monitoring locations and details of the baseline and construction monitoring program. All existing and proposed groundwater monitoring locations along the alignment are shown on figures in Annexure A.

5.1 Baseline monitoring

5.1.1 Overview

Locations with baseline groundwater level and quality data are summarised in Section 5.2.2, with additional discussion of key contamination sources and their impact on groundwater quality provided in Sections 2.4 and 4.2.

Baseline groundwater level and quality monitoring data has been collected from the Project groundwater monitoring network since 2019. The current dataset has been augmented by data from a number of sources as listed in Section 10 of the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403).

Available groundwater level and quality data has been compiled for the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403 and will be supplemented with additional information collected by CPBG during the site investigation and baseline sampling phase of the SBT Works.

5.1.2 Existing Data

The Project baseline monitoring network was installed between 2019 and 2021, and consists of 88 groundwater monitoring bores, and 24 vibrating wire piezometers (VWPs) installed at eight (8) locations along the alignment. Monitoring bores were designed to target the following three hydrogeological units:

- Quaternary alluvial aquifer
- Residual soils, including perched water
- Bedrock aquifer, predominantly in the Bringelly Shale.

Of the 88 project groundwater monitoring wells 74 have some water quality data, and 81 have digital groundwater level (hydrograph) data. A number of the 74 project wells with water quality data have only been sampled for a limited analytical suite or have only been sampled once.

No sampling for groundwater quality has been undertaken from 14 of the monitoring wells installed for the project, which includes some locations where data gaps relating to groundwater quality were identified during tender.

Groundwater quality data is also available from nine (9) groundwater wells installed at Western Sydney International (WSI), with these wells sampled up to eight times between March 2017 and April 2019.

Data from these monitoring locations is included in Annexure D and summarised and discussed in Section 15 of the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403). The existing monitoring bores and VWPs are shown on figures in Annexure A, with details listed in Table 5-1 and 5-2 respectively, including whether temporal groundwater level data (hydrographs) or water quality data is available.

Available water quality monitoring based on data from the 81 project wells and nine WSI wells has been collated and is attached as Annexure D. Water quality summaries for each area are provided in Section 8 of the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403).

Table 5-1: Existing monitoring bores with level and water quality data

Location description	Bore ID	Easting MGA2020	Northing MGA2020	Unit monitored	Screen from (mbgl)	Screen to (mbgl)	Elevation top of casing (mAHD	Level data	Water quality data
St Marys	SMGW-GW01	293864	6261985	Residual	4.5	7.5	35.12	NO	YES
St Marys	SMGW-GW02	293887	6261984	Residual	5	8	35.39	NO	YES
St Marys	SMGW-BH-A002	294138	6261944	Bedrock	21.7	27.7	36.2	YES	YES
South Creek	SMGW-BH-A011S	292893	6262064	Alluvium	1.8	4.8	19.96	YES	YES
Werrington - Lethbridge Avenue	SMGW-BH-A012	291602	6262452	Bedrock	25	34	29.45	YES	YES
Orchards Hill	SMGW-BH-A017	291728	6258996	Bedrock	15	24	43.6	YES	YES
Gipps Street	SMGW-BH-A019	291953	6260516	Bedrock	28	34	42.2	YES	YES
St Marys Station	SMGW-BH-A102	294051	6261946	Residual	3	8	36.8	YES	YES
TBM Tunnel - St Marys	SMGW-BH-A103	294351	6261870	Bedrock	15	24	46.4	YES	YES
TBM Tunnel - South Creek	SMGW-BH-A105	293098	6262002	Bedrock	15	28	22.6	YES	YES
TBM Tunnel - South Creek	SMGW-BH-A105S	293100	6261999	Alluvium/Residual	2	8	22.6	YES	YES
TBM Tunnel - South Creek	SMGW-BH-A107	292413	6261713	Bedrock	19	26	22.5	YES	YES
TBM Tunnel - South Creek	SMGW-BH-A107S	292413	6261713	Residual	3	5	22.5	YES	YES
Claremont Meadows Facility	SMGW-BH-A109	292038	6261300	Bedrock	16	25	27.1	YES	YES
Claremont Meadows Facility	SMGW-BH-A109S	292037	6261297	Residual	3.5	5	27.4	YES	YES
TBM Tunnel - Gipps Street	SMGW-BH-A111	291915	6260719	Bedrock	29	38	41.7	YES	YES
TBM Tunnel M4	SMGW-BH-A113	291786	6259594	Bedrock	20	29	43.4	YES	YES

Location description	Bore ID	Easting MGA2020	Northing MGA2020	Unit monitored	Screen from (mbgl)	Screen to (mbgl)	Elevation top of casing (mAHD	Level data	Water quality data
Orchards Hill Station	SMGW-BH-A117	291855	6258838	Bedrock	10	16	38.9	YES	YES
Orchard Hills - Landsdowne Road	SMGW-BH-A117S	291857	6258839	Residual	2.2	4.2	38.78	YES	YES
Claremont Meadows	SMGW-BH-A121	291944	6260883	Bedrock	15	21	38.6	YES	YES
Claremont Meadows	SMGW-BH-A122	291893	6260308	Bedrock	25	35	41.4	YES	YES
TBM Tunnel - Orchard Hills	SMGW-BH-A123	291769	6260026	Bedrock	30	39	49	YES	YES
St. Mary's Station	SMGW-BH-A202	293937	6261970	Bedrock	7.5	9.5	35.53	YES	YES
St Marys Station	SMGW-BH-A302	293999	6261951	Residual/Bedrock	5.6	11.6	35.81	YES	YES
A302 Bus Interchange	SMGW-BH-A304	292037	6261246	Bedrock	9.75	15.75	27.81	YES	YES
Kent Road	SMGW-BH-A310	291737	6259192	Bedrock	7	14	39.93	YES	YES
Kent Road	SMGW-BH-A310S	291737	6259191	Residual	2	7	39.94	YES	YES
Kent Road	SMGW-BH-A311	291738	6259051	Residual/Bedrock	3	9	43.49	YES	YES
40-48 Lansdowne Rd, Orchard Hills	SMGW-BH-A315	291727	6258864	Residual/Bedrock	4	10	42.28	YES	YES
St Marys Station	SMGW-BH-A321	294200	6261917	Residual/Bedrock	3	9	41.66	YES	YES
St Marys Station	SMGW-BH-A321S	294200	6261915	Residual/Bedrock	3	9	41.65	YES	YES
Luddenham Road	SMGW-BH-B106	291703	6256950	Alluvium	1	4	39.4	YES	YES
Luddenham Road	SMGW-BH-B109	291572	6256049	Bedrock	9	13	41.5	YES	YES
Luddenham Road Station	SMGW-BH-B120	290964	6253779	Bedrock	5	14	52.6	YES	YES
Luddenham Road Station	SMGW-BH-B121	290940	6253451	Residual	2	3	56.6	YES	NO

Location description	Bore ID	Easting MGA2020	Northing MGA2020	Unit monitored	Screen from (mbgl)	Screen to (mbgl)	Elevation top of casing (mAHD	Level data	Water quality data
Luddenham Road	SMGW-BH-B123	290939	6253035	Bedrock	5	14	57.2	YES	NO
Elizabeth Drive	SMGW-BH-B130	291379	6250043	Bedrock	5	14	60.3	YES	YES
Orchard Hills - Luddenham Road	SMGW-BH-B308	292033	6257200	Residual	1.2	4.2	34.82	YES	YES
Orchard Hills - Luddenham Road	SMGW-BH-B309	291836	6257203	Residual	0.9	5.4	35.63	YES	YES
Patons Ln Orchard Hills	SMGW-BH-B312	291562	6255942	Residual	1	4	41.95	YES	YES
Department of Defence (DOD)	SMGW-BH-B313	291504	6255514	Residual	1	4	38.9	YES	YES
Orchard Hills - Warragamba pipeline	SMGW-BH-B319	291173	6254264	Residual/Bedrock	1.8	4.8	50.02	YES	YES
463A Luddenham Rd Luddenham	SMGW-BH-B320	291041	6254012	Residual	1	4	49.93	NO	YES
642 Luddenham Rd Luddenham	SMGW-BH-B325	291331	6251967	Residual	1	4	48.6	YES	YES
Badgerys Creek	SMGW-BH-C001S	288971	6246104	Residual	2	4	66.95	YES	YES
Badgerys Creek	SMGW-BH-C002	288852	6246087	Bedrock	6	15	66.79	YES	YES
WSI	SMGW-BH-C201	290279	6248348	Bedrock	13.6	28.6	68.71	YES	YES
WSI	SMGW-BH-C201S	290274	6248345	Residual/Bedrock	2.9	5.9	68.77	YES	YES
WSI	SMGW-BH-C206	288838	6247416	Bedrock	21	27	81.61	YES	YES
WSI	SMGW-BH-C207	288773	6247042	Bedrock	29	38	88.76	YES	NO
WSI	SMGW-BH-C208	288878	6246774	Bedrock	31.3	40.3	79.46	YES	YES
WSI	SMGW-BH-C209	289128	6246455	Bedrock	20.2	29.2	75.44	YES	YES

Location description	Bore ID	Easting MGA2020	Northing MGA2020	Unit monitored	Screen from (mbgl)	Screen to (mbgl)	Elevation top of casing (mAHD	Level data	Water quality data
WSA CIZ	SMGW-BH-C301	291370	6249349	Alluvium	1	4	58.98	YES	YES
WSA CIZ	SMGW-BH-C302	291326	6249157	Residual	1	4	62.46	YES	YES
WSA CIZ	SMGW-BH-C303	291075	6248861	Residual/Bedrock	1.5	5.5	60.15	YES	NO
WSA CIZ	SMGW-BH-C304	290945	6248669	Residual/Bedrock	1.5	5.5	63.77	YES	YES
WSA CIZ	SMGW-BH-C305	290762	6248715	Residual/Bedrock	2.5	6.5	63.04	YES	YES
WSA NON-CIZ	SMGW-BH-C320	289629	6246535	Residual/Bedrock	3	9	66.47	YES	YES
WSA NON-CIZ	SMGW-BH-C321	289809	6246630	Residual/Bedrock	1.5	6	63.45	NO	YES
WSA NON-CIZ	SMGW-BH-C322	289595	6246615	Residual/Bedrock	1.5	6	69.01	YES	YES
WSA NON-CIZ	SMGW-BH-C325	289414	6246914	Bedrock	7	10	74.38	YES	YES
WSA NON-CIZ	SMGW-BH-C330	289535	6246507	Bedrock	3	9	69.35	YES	NO
WSA NON-CIZ	SMGW-BH-C331	289220	6247060	Bedrock	2.5	8.5	78.71	YES	YES
WSA NON-CIZ	SMGW-BH-C332	289459	6247135	Bedrock	4	9	81.83	YES	NO
WSA NON-CIZ	SMGW-BH-C340	291542	6248270	Bedrock	13	22	62.13	YES	YES
WSA NON-CIZ	SMGW-BH-C341	291848	6248251	Residual/Bedrock	3.1	9.1	53.18	YES	YES
WSA NON-CIZ	SMGW-BH-C343	291351	6247890	Bedrock	5.5	11.5	58.62	YES	YES
WSA NON-CIZ	SMGW-BH-C351	290304	6247361	Bedrock	4	10	67.96	YES	YES
Aerotropolis	SMGW-BH-D109	290715	6243825	Bedrock	11	20	72.6	YES	YES
Aerotropolis	SMGW-BH-D109S	290716	6243821	Bedrock	5.95	8.95	72.4	YES	YES

Location description	Bore ID	Easting MGA2020	Northing MGA2020	Unit monitored	Screen from (mbgl)	Screen to (mbgl)	Elevation top of casing (mAHD	Level data	Water quality data
Aerotropolis - Bringelly	SMGW-BH-D205	290390	6244794	Bedrock	22	28	79.3	YES	YES
Aerotropolis - Bringelly	SMGW-BH-D206	290513	6244560	Bedrock	22	28	79.15	YES	YES
Aerotropolis - Bringelly	SMGW-BH-D207	290718	6244026	Bedrock	8	11	70.13	YES	YES
Aerotropolis - Bringelly	SMGW-BH-D208	290743	6243691	Residual/Bedrock	1	4.1	67.87	YES	YES
40 Derwent Road Bringelly	SMGW-BH-D303	289601	6245801	Bedrock	4.5	9.5	72.85	YES	YES
40 Derwent Road Bringelly	SMGW-BH-D303S	289599	6245794	Bedrock	5.6	11.6	73.23	YES	YES
220 Badgerys Creek Road Bringelly	SMGW-BH-D305	290097	6245334	Bedrock	9.75	15.75	68.89	YES	YES
Aerotropolis	SMGW-BH-D308	290715	6243914	Residual/Bedrock	3	9	73.35	YES	YES
Aerotropolis	SMGW-BH-D310	290672	6244145	Bedrock	3	9	71.55	YES	YES
Aerotropolis	SMGW-BH-D322	290677	6244060	Bedrock	4	10	72.12	YES	YES
Aerotropolis	SMGW-BH-D324	290695	6243992	Residual	1	4	71.23	YES	YES
Aerotropolis	SMGW-BH-D326	290704	6243892	Residual	1	4	74.18	YES	YES
Aerotropolis	SMGW-BH-D329	290720	6243765	Residual	1	4	69.19	YES	YES
WSI bores									
WSI	WSA GW04	288574	6246161	-	17	20	74.3	NO	YES
WSI	WSA GW06	288413	6246761	Bedrock	17	20	88.3	NO	YES
WSI	WSA GW07	288413	6246761	Bedrock	7	10	88	NO	YES
WSI	WSA GW08	289013	6246245	Bedrock	7	10	67.8	NO	YES

Location description	Bore ID	Easting MGA2020	Northing MGA2020	Unit monitored	Screen from (mbgl)	Screen to (mbgl)	Elevation top of casing (mAHD	Level data	Water quality data
WSI	WSA GW16	290461	6247764	-	7	10	78.1	NO	YES
WSI	WSA GW19	291738	6248976	-	7	10	58.3	NO	YES
WSI	WSA GW20	292130	6249000	Bedrock	17	20	48.1	NO	YES
WSI	WSA GW21	292130	6249000	-	7	10	48.1	NO	YES
WSI	WSA GW23	291265	6247780	-	7	10	59	NO	YES

Table 5-2: Existing VWPs with level data

Location description	VWP ID	Easting MGA2020	Northing MGA2020	Stratigraphic unit	VWP sensor elevation (mbgl)	VWP sensor elevation (mAHD)	Ground surface level (mAHD)
St Marys	SMGW-BH-A001	293993	6262029	Residual	8	26.4	34.4
St Marys	SMGW-BH-A001	293993	6262029	Bedrock	18	16.4	34.4
St Marys	SMGW-BH-A001	293993	6262029	Bedrock	26	8.4	34.4
St Marys	SMGW-BH-A001	293993	6262029	Bedrock	31	3.4	34.4
South Creek	SMGW-BH-A011	292889	6262062	Residual	5.5	14.6	20.1
South Creek	SMGW-BH-A011	292889	6262062	Bedrock	10.5	9.6	20.1
South Creek	SMGW-BH-A011	292889	6262062	Bedrock	23.5	-3.4	20.1
South Creek	SMGW-BH-A011	292889	6262062	Bedrock	30	-9.9	20.1
Orchard Hills	SMGW-BH-A115	291729	6259341	Bedrock	7	33.4	40.4
Orchard Hills	SMGW-BH-A115	291729	6259341	Bedrock	18	22.4	40.4
Orchard Hills	SMGW-BH-A115	291729	6259341	Bedrock	21	19.4	40.4
St Marys	SMGW-BH-A300	294474	6261885	Residual	4.3	33.9	38.2
St Marys	SMGW-BH-A300	294474	6261885	Bedrock	20.1	18.1	38.2
Luddenham Road	SMGW-BH-B122	290940	6253280	Bedrock	4	55.0	59
Luddenham Road	SMGW-BH-B122	290940	6253280	Bedrock	20	39.0	59
WSI	SMGW-BH-C111	289292	6246221	Alluvium	6.4	59.4	65.8
WSI	SMGW-BH-C111	289292	6246221	Bedrock	13.9	51.9	65.8
WSI	SMGW-BH-C111	289292	6246221	Bedrock	21.9	43.9	65.8
Derwent Road	SMGW-BH-D103	289676	6245697	Bedrock	10	64.7	74.7
Derwent Road	SMGW-BH-D103	289676	6245697	Bedrock	25	49.7	74.7
Derwent Road	SMGW-BH-D103	289676	6245697	Bedrock	40	34.7	74.7
Aerotropolis	SMGW-BH-D209	290782	6243299	Residual	6.5	58.3	64.8
Aerotropolis	SMGW-BH-D209	290782	6243299	Bedrock	14.2	50.6	64.8
Aerotropolis	SMGW-BH-D209	290782	6243299	Bedrock	26	38.8	64.8

5.2 Additional baseline monitoring and assessment

5.2.1 Identified data gaps – groundwater contamination

Data gaps relating to potential sources of groundwater contamination are detailed in Section 15 and Appendix E of the HIR (SMWSASBT-CPG-SWD-SW000-GE-RPT-040403), and are summarised in Table 5-3.

Table 5-3: Groundwater contamination data gaps

Area	Site	Current understanding	Identified data gap
St Marys Station	Former dry cleaner	Investigations at site have confirmed presence of chlorinated hydrocarbons in groundwater and vapour at site. The composition (predominantly PCE) and increasing concentrations at depth is consistent with an onsite DNAPL source.	The vertical and lateral extent of chlorinated hydrocarbon impact is unknown.
St Marys Station	Harris St construction laydown area	Former wreckers, workshop, bus depot and plastic manufacturer. There is limited groundwater quality data in area and not in suspected source areas adjacent to the station excavation. UST fill points and pumps were also identified in 2019 on NE corner of Harris and Forrester St within drawdown area.	No groundwater data within or downgradient of suspected source areas
St Marys Station	Former Industrial sites to south of station on Queen and Philip Streets	Former site uses within the predicted 5m draw down area include waterproofer, former service stations and dry cleaner	No groundwater data within or downgradient of suspected source areas
St Marys Station	St Marys Plaza	Former service station and potential chemical storage for backup generators	No groundwater data within or downgradient of the suspected source area, or between the area and station construction area
Claremont Meadows Facility	Possible historic service station	Suspected source within 60m of excavation based on site layout on historic aerial imagery	No groundwater data within the suspected source area, and shallow well downgradient not analysed for petroleum hydrocarbons
Claremont Meadows Facility	Gipps Street Landfill	Previous investigation of the Gipps Street Landfill described in the EIS reported contamination in groundwater derived from landfill leachate including but not limited to ammonia, metals, pesticides, and other organic compounds.	Vertical and lateral extent of impact is not known
Orchard Hills Station	34-38 Lansdowne Road	Suspected use of herbicides and pesticides on cultivated land. Site within predicted drawdown area.	Groundwater data indicates metals contamination is present. Vertical and lateral extent of impact is not known

Area	Site	Current understanding	Identified data gap
Orchard Hills Station	64 Kent Road	Unlicensed waste disposal suspected adjacent to and downgradient of construction area and within predicted drawdown area	No groundwater data within or downgradient of suspected source area, or between the area and station construction area
Orchard Hills Station	94-98 Kent Road	Suspected former cattle or sheep dip, and area of stressed vegetation. Directly on station construction area, and within predicted drawdown area	Elevated metals concentrations in groundwater, and detectable concentrations of hydrocarbons. The vertical and lateral extent of groundwater impact is not known
Airport Dive Portal	Draw down area	No indications of gross contamination, however limited groundwater quality data. Metals, PAH and TRH detected in soil data in vicinity of drawdown area, and PFAS detected soil on alignment in construction area (SMGW-TP-C343).	Limited groundwater data available within predicted groundwater drawdown area
Airport Terminal	Draw down area	No indications of gross contamination, however limited groundwater quality data. Elevated zinc identified in soil in area.	Limited groundwater data available within predicted groundwater drawdown area
Bringelly Service Facility	Draw down area	Elevated strontium detected in groundwater (source unknown). PFAS detected in groundwater, and low level volatile hydrocarbons detected at depth in soil.	Insufficient groundwater data to assess whether contaminant concentrations reported represent maximum in construction/drawdown area
Aerotropolis Core Station	Former OTC site compound	Site inspection in 2019 identified UST, transformer and substation, fire hydrants and pumphouse. PFAS, volatile hydrocarbons and low concentrations of methane and DDD detected in groundwater.	Extent of groundwater impact is unknown

5.2.2 Site Investigation and Baseline Assessment Works

5.2.2.1 Proposed new monitoring locations

Site investigation (SI) works to support detailed design and provide baseline assessment data include the installation of groundwater monitoring bores and VWPs across the SBT Works alignment. The SI works include locations that will provide additional data to address the data gaps for potentially contaminated areas that are assessed as high risk as summarised in Table 5-3. Data from these groundwater locations will also be included in the Detailed Site Investigation (DSI) reports focused on assessing contamination. Many of the proposed groundwater monitoring locations to be installed for the SI works will form part of the construction monitoring network (Section 6).

In addition to providing data to support detailed design, and assessment of contamination, a number of additional monitoring wells are also proposed to support the construction monitoring program (Section 6). These locations are to specifically monitor where the potential for environmental impacts during construction has been identified, or where existing wells will either be destroyed or become dry during construction, and no existing monitoring locations are available as an alternative.

Groundwater monitoring bores and VWPs to be installed as part of SI and baseline assessment works are shown on Figures 5-1 and 5-2, with details of depth, co-ordinates and target stratigraphic unit summarised in Tables 5-4 and 5-5. Groundwater samples collected for baseline assessment from all proposed locations will be analysed for the full analytical suite as detailed in Table 7-2, Section 7.

All new monitoring bores will be sampled for water quality and levels which will provide an adequate and appropriate baseline dataset. Based on a review of all baseline data, the locations included for construction monitoring, frequency of sampling and appropriate ongoing analytical suite will be refined (refer Section 9.3). A review will be undertaken of the analytical results and comparison to the screening criteria as outlined in Section 6. Where criteria exceedances are identified, and concentrations are outside the background range for groundwater along the alignment, the monitoring plan will be reviewed as outlined in Section 9.

For locations included in construction monitoring, sampling will revert to monthly for data level downloads or those locations nominated for six monthly groundwater quality monitoring as detailed in Section 6 and summarised in Table A1.

5.2.2.2 Sampling of existing monitoring bores

A number of existing groundwater monitoring bores have not been sampled and analysed for a full analytical suite, including some bores where previous analysis has not included nearby suspected contaminants. The SI and baseline assessment works will therefore also include sampling and analysis of existing wells to provide this data for the baseline assessment.

Based on the review of historical data there are potentially another 33 non-project monitoring wells within 1km of the rail alignment which could be used to supplement the baseline dataset and/or monitoring network if the wells still exist and are in useable condition.

Where samples are able to be collected from non-project bores, samples collected will be analysed at least once for the full analytical suite as detailed in Table 7-2, Section 7. The need for additional baseline sampling from non-project wells, or inclusion in the construction monitoring program, will be evaluated based on the initial sampling results.

Details of non-project bores and VWPs within 1km of the alignment are included in the monitoring network summary table in Annexure A (Table A.1), and are shown on Figure A1 to A10.

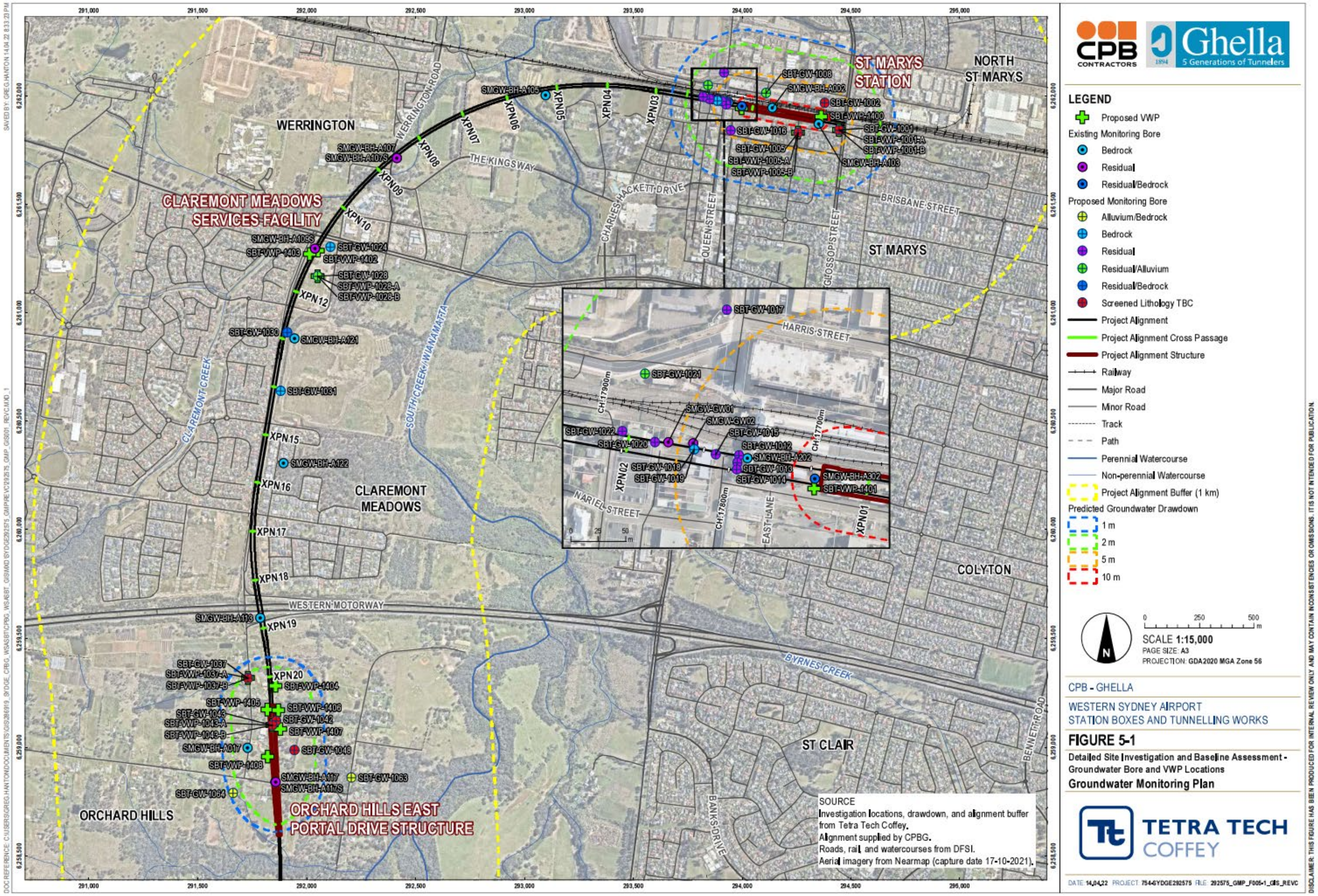

Figure 5-1: Detailed Site Investigation and Baseline Assessment Works – Northern Groundwater Bore and VWP Locations

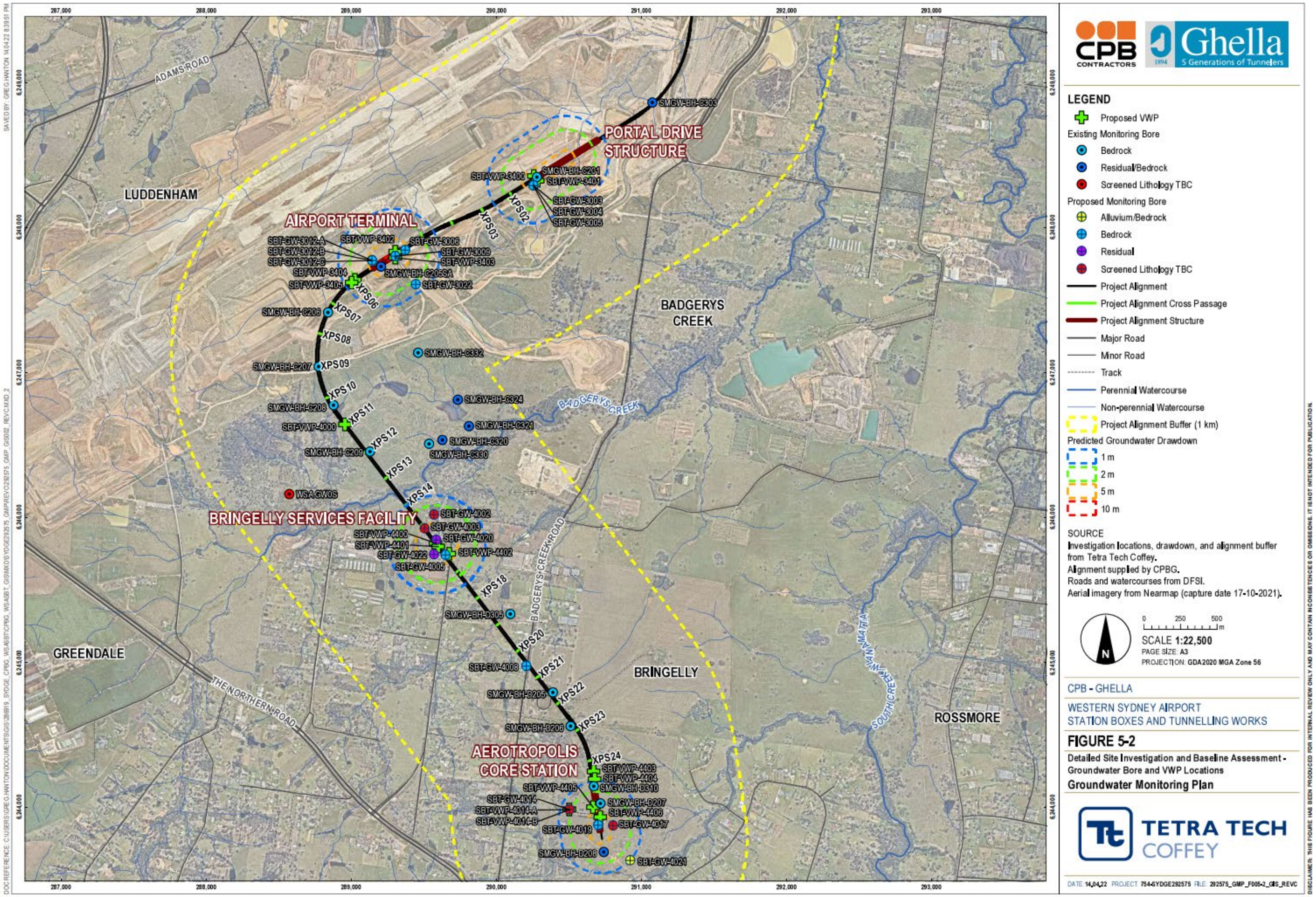

Figure 5-2: Detailed Site Investigation and Baseline Assessment Works – Southern Groundwater Bore and VWP Locations

Table 5-4: Proposed groundwater monitoring bores for SI and baseline assessment works

Location description	Bore ID	Easting MGA2020	Northing MGA2020	Target unit	Screen from (mbgl)	Screen to (mbgl)
St Marys Station	SBT-GW-1021	293843	6262048	Residual/ Alluvium	2	8
St Marys Station	SBT-GW-1008	294110	6262013	Residual/ Alluvium	2	8
St Marys Station	SBT-GW-1022	293861	6261977	Residual	9	12
St Marys Station	SBT-GW-1018	293888	6261978	Residual	10	13
St Marys Station	SBT-GW-1019	293888	6261978	Bedrock	15	18
St Marys Station	SBT-GW-1002	294381	6261967	TBC	2	8
St Marys Station	SBT-GW-1001	294446	6261843	TBC	2	8
St Marys Station	SBT-GW-1016	293948	6261839	Residual	5	10
St Marys Station	SBT-GW-1005	294259	6261830	TBC	2	8
Claremont Meadows Services facility	SBT-GW-1028	292050	6261168	Residual/ Alluvium	3	6
Cross passage XPN13/ Tunnel	SBT-GW-1030	291905	6260908	Residual/ Bedrock	2	6
Cross passage XPN14/ Tunnel	SBT-GW-1030	291880	6260640	Bedrock	15	20
Orchard Hills Station	SBT-GW-1037	291731	6259318	TBC	2	8
Orchard Hills Station	SBT-GW-1041	291860	6259122	TBC	2	8
Orchard Hills Station	SBT-GW-1043	291842	6259102	TBC	2	8
Orchard Hills Station	SBT-GW-1048	291945	6258986	TBC	2	8
Portal / Cross passage XPS03	SBT-GW-3005	290258	6248292	Bedrock	19	22
Portal / Cross passage XPS01	SBT-GW-3003	290258	6248292	TBC	2	5
Airport terminal	SBT-GW-3006	289371	6247845	Bedrock	29	35
Airport terminal	SBT-GW-3009	289303	6247803	Bedrock	34	40
Bringelly Services Facility	SBT-GW-4002	289571	6246020	TBC	2	7
Bringelly Services Facility	SBT-GW-4003	289507	6245924	TBC	2	7
Bringelly Services Facility	SBT-GW-4005	289652	6245743	Bedrock	30	36
Cross passage XPS20 / Tunnel	SBT-GW-4008	290209	6244977	Bedrock	26	32
Aerotropolis Station	SBT-GW-4014	290504	6243986	TBC	5	14
Aerotropolis Station	SBT-GW-4017	290806	6243873	TBC	2	12
Aerotropolis Station	SBT-GW-4019	290701	6243877	Bedrock	20	30

Table 5-5: Proposed VWPs for SI works

Location description	VWP ID	Easting MGA2020	Northing MGA2020	Stratigraphic unit	VWP sensor elevation (mbgl)
St Marys	SBT-VWP-1401	293998	6261941	Bedrock	23
St Marys	SBT-VWP-1400	294364	6261902	Bedrock	23
St Marys	SBT-VWP-1001-A	294446	6261843	Bedrock	29
St Marys	SBT-VWP-1001-B	294446	6261843	Bedrock	34
St Marys	SBT-VWP-1005-A	294259	6261830	Bedrock	26
St Marys	SBT-VWP-1005-B	294259	6261830	Bedrock	31
St Marys	SBT-VWP-1402	292053	6261285	Bedrock	24
Claremont Meadows	SBT-VWP-1403	292014	6261270	Bedrock	19
Claremont Meadows	SBT-VWP-1028-A	292050	6261168	Bedrock	23
Claremont Meadows	SBT-VWP-1028-B	292050	6261168	Bedrock	28
Orchard Hills	SBT-VWP-1037-A	291731	6259318	Bedrock	18
Orchard Hills	SBT-VWP-1037-B	291731	6259318	Bedrock	23
Orchard Hills	SBT-VWP-1404	291857	6259281	Bedrock	16
Orchard Hills	SBT-VWP-1405	291819	6259172	Bedrock	16
Orchard Hills	SBT-VWP-1406	291869	6259169	Bedrock	16
Orchard Hills	SBT-VWP-1043-A	291842	6259102	Bedrock	14
Orchard Hills	SBT-VWP-1043-B	291842	6259102	Bedrock	19
Orchard Hills	SBT-VWP-1407	291881	6259083	Bedrock	16
Orchard Hills	SBT-VWP-1408	291821	6258955	Bedrock	16
Western Sydney Airport	SBT-VWP-3400	290259	6248356	Bedrock	15
Western Sydney Airport	SBT-VWP-3401	290285	6248321	Bedrock	15
Western Sydney Airport	SBT-VWP-3402	289302	6247833	Bedrock	24
Western Sydney Airport	SBT-VWP-3403	289305	6247793	Bedrock	24
Western Sydney Airport	SBT-VWP-3404	289027	6247640	Bedrock	24
Western Sydney Airport	SBT-VWP-3405	289004	6247620	Bedrock	24
Western Sydney Airport	SBT-VWP-4000	288957	6246640	Bedrock	47
Bringelly Services Facility	SBT-VWP-4400	289584	6245820	Bedrock	21
Bringelly Services Facility	SBT-VWP-4401	289600	6245800	Bedrock	21

Location description	VWP ID	Easting MGA2020	Northing MGA2020	Stratigraphic unit	VWP sensor elevation (mbgl)
Bringelly Services Facility	SBT-VWP-4402	289678	6245750	Bedrock	21
Aerotropolis Station	SBT-VWP-4403	290672	6244246	Bedrock	16
Aerotropolis Station	SBT-VWP-4404	290680	6244194	Bedrock	16
Aerotropolis Station	SBT-VWP-4405	290668	6244001	Bedrock	16
Aerotropolis Station	SBT-VWP-4014-A	290504	6243986	Bedrock	26
Aerotropolis Station	SBT-VWP-4014-B	290504	6243986	Bedrock	23
Aerotropolis Station	SBT-VWP-4406	290718	6243931	Bedrock	28

5.2.3 GDE monitoring

GDE monitoring will include both groundwater level and quality monitoring (outlined in the preceding sections) and vegetation surveys. Detail on the vegetation surveys is provided in the Flora and Fauna Management Sub-Plan.

5.2.3.1 Groundwater level and quality monitoring

Nominated locations for level and quality (EC) monitoring in the vicinity of GDEs are provided in Table 5-6, which are part of the wider monitoring network detailed in Section 6. Groundwater level and EC monitoring will be conducted at one hourly intervals by dataloggers, with monthly data downloads and manual gauging of these bores.

The data review process (Section 8.3) will include comparison of data with groundwater level loggers installed in nearby control locations away from mapped GDEs to identify where changes in levels are due to seasonal variation rather than project related. Groundwater level measurements in GDE monitoring locations will also be reviewed to discern diurnal pattern of vegetation water-use which can cause small daily fluctuations in the groundwater levels.

Table 5-6: Summary of existing and proposed new wells for GDE groundwater monitoring

Well ID	Easting MGA2020	Northing MGA2020	Status
SMGW-BH-A109S	292037	6261297	Existing
SBT-GW-1027	292050	6261168	Proposed
SBT-GW-1041	291860	6259122	Proposed
SBT-VWP-1406	291869	6259169	Proposed
SBT-GW-4021	290925	6243633	Proposed
SBT-GW-1063	292205	6258860	Proposed
SBT-GW-1064	291663	6258788	Proposed

6 Construction monitoring

Groundwater level and quality monitoring will be carried out at a combination of existing and proposed baseline monitoring bores and VWPs. Bore and VWP locations initially proposed for inclusion in the construction monitoring program are shown on Figures 6-1 to 6-4, with a preliminary proposed construction groundwater monitoring program provided in Tables 6-1 and 6-2. Additional level monitoring will be undertaken as required from select locations during tunnelling and cross passage construction, refer Table A1, Annexure A.

Note that due to access issues, groundwater levels during construction of XPS18 to XPS22 will be monitored using a combination of existing monitoring wells within 250m of cross passages, and proposed monitoring well SBT-GW4008 on Badgerys Creek Road. Monitoring will be supported by modelling to assess the likely influence of construction drawdown, and comparison to similar lithologies elsewhere along the alignment where the effects of cross passage construction can be measured close to the construction area.

The construction monitoring program will be updated following the collection of additional baseline data as outlined in Section 5.2.

The adequacy of the monitoring network will be reviewed and revised (if required) if the modelled extent of drawdown is significantly changed due to the design changes.

6.1 Groundwater level and field salinity monitoring

Groundwater levels during construction will be monitored predominantly through VWPs as listed in Tables 6-2 and 6-5, with the methodology and data reporting detailed in Section 6.2.

Continuous EC and level monitoring will be undertaken in select groundwater wells (Table 6-1), with all groundwater bores included in the construction water quality monitoring program (Section 6.2) gauged prior to sampling.

All level / EC loggers will record on hourly intervals, which may be adjusted over consecutive monitoring events according to observed fluctuations or trends in groundwater conditions.

Table 6-1: Groundwater bores to be monitored for EC and level during construction

Location description	Bore ID	Easting MGA2020	Northing MGA2020	Target stratigraphic unit	Screen Interval (mbgl))	Monitoring
Tunnel / South Creek	SMGW-BH-A105S	293100	6261999	Alluvium/Residual	2 - 8	Level / EC
Tunnel / South Creek	SMGW-BH-A107	292413	6261713	Bedrock	19 - 26	Level / EC
Tunnel / South Creek	SMGW-BH-A107S	292413	6261713	Residual	3 - 5	Level / EC
Claremont Meadows	SMGW-BH-A109S	292037	6261297	Residual	3.5 - 5	Level / EC
Claremont Meadows	SBT-GW-1027	292050	6261168	Residual/Alluvium	3 - 6	Level / EC
Orchard Hills	SBT-GW-1041	291860	6259122	TBC	2 - 8	Level / EC
Orchard Hills	SBT-GW-1063	292205	6258860	Alluvium/ Bedrock	2 -11	Level / EC
Orchard Hills	SBT-GW-1064	291663	6258788	Alluvium/ Bedrock	2 - 14	Level / EC
Aerotropolis	SBT-GW-4021	290925	6243633	Alluvium/ Bedrock	2 - 11	Level / EC
Airport terminal	SBT-BH-3006	289371	6247845	Bedrock	29 - 25	Level / EC
Airport terminal	SBT-GW-3012-A	289144	6247771	Bedrock	2 - 8	Level / EC

Location description	Bore ID	Easting MGA2020	Northing MGA2020	Target stratigraphic unit	Screen Interval (mbgl))	Monitoring
Airport terminal	SBT-GW-3012-B	289144	6247771	Bedrock	10 - 16	Level / EC
Airport terminal	SBT-GW-3022	289444	6247608	Bedrock	3 - 15	Level / EC
WSA, XPS12	SMGW-BH-C209	289127.8	6246455.3	Bedrock	20.2 – 29.2	Level / EC
Aerotropolis - Bringelly	SMGW-BH-D205	290390.4	6244794	Bedrock	22 - 28	Level / EC
Bringelly	SMGW-BH-D305	290097.20	6245334	Bedrock	9.75 –15.7	Level / EC
Bringelly Service Facility	SBT-GW-4020	289585	6245845	Residual	4 - 16	Level / EC
Bringelly Service Facility	SBT-GW-4022	289572	6245747	Residual	4 - 16	Level / EC

6.1.1 GDE monitoring performance criteria

Risk posed by altered groundwater quality to GDE health are currently considered negligible and the baseline and construction groundwater quality monitoring program (outlined in Sections 5.2 and 6.1) is considered sufficient for GDE monitoring for the SBT Works.

Level monitoring is the primary, leading indicator of potential impact to GDEs. Groundwater level and EC monitoring will be conducted from monitoring wells identified in Table 6.1, which includes proposed wells in the vicinity of GDEs to specifically monitor GDE conditions (Section 5.2.3).

Groundwater level and quality monitoring will be conducted using data loggers that can record EC, temperature and groundwater level. The loggers will be installed at key monitoring bores between the rail alignment and GDEs (Table 6-2) and programmed to record data hourly.

Data loggers will be downloaded and locations manually gauged on a monthly basis, which is considered sufficient as the timing for changes in water level and quality with respect to GDEs is expected to be greater than one month. The monthly download and review of data will be supported by laboratory testing of water quality as outlined in Section 6.2.

Site specific trigger values (SSTVs) will be developed following completion of additional baseline groundwater level and quality monitoring, and following completion of the baseline vegetation surveys (refer Flora and Fauna Management Sub-Plan). SSTVs will be developed by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP (SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme.

Table 6-2: Preliminary EC SSTVs for continuous EC monitoring of GDEs

Area	Bore ID	Screened unit	Installed/ Proposed screen depth (mbgl)	Baseline EC range (µS/cm) May 2020 - Feb 2021	Preliminary EC SSTV (µS/cm)
Claremont Meadows	SMGW-BH-A109S	Residual	3.5 - 5	876 – 1,420	2,130
Claremont Meadows	SBT-GW-1027	Residual/Alluvium	3 - 6	Not yet installed	TBD
Orchard Hills	SBT-GW-1041	TBC	2 - 8		
Orchard Hills	SBT-VWP-1406	Bedrock	16 (VWP)		

Area	Bore ID	Screened unit	Installed/ Proposed screen depth (mbgl)	Baseline EC range (µS/cm) May 2020 - Feb 2021	Preliminary EC SSTV (µS/cm)
Orchard Hills	SBT-GW-1063	Alluvium/Bedrock	2 -11		
Orchard Hills	SBT-GW-1064	Alluvium/Bedrock	2 - 14		
Aerotropolis	SBT-GW-4021	Alluvium/Bedrock	2 - 11		

Data from the monthly downloads will be assessed against the SSTVs to identify where conditions are not as expected or predicted (discussed further below). Data analysis and groundwater monitoring reports will be produced every 12 months. A review of the monitoring program after the first 12 months of construction will be completed to determine the efficiency of the monitoring program for GDEs and any required changes.

The preliminary EC SSTVs will be developed and refined over time as monitoring locations are installed, and existing variability including seasonal trends and vertical stratification are further assessed.

The SSTVs will provide an identifiable indication of a potential change in salinity. A management response would be initiated if any of the following occurs:

- EC data continuously exceeds the SSTV over a period of three months and displays a rising trend
- EC data exceeds the SSTV at any time by more than 150%.

If one or both of the above EC triggers are observed a review will be initiated to determine the significance of the exceedance(s) and possible causes, including a review to assess the historical and surrounding monitoring bore data, and modelling predictions. Where high saline areas (>1000 µS/cm) are identified, measures such as planting, regenerating and maintaining native vegetation and good ground cover in recharge, transmission and discharge zones would be implemented where possible.

In addition to SSTVs for EC, SSTVs will also be developed for level decline at each GDE based on their obligate or facultative dependence. SSTVs will be linked to Trigger Action Response Plans which will include the following response levels:

- Alert – Concentration of TDS is within 10% of the SSTV which will lead to:
    - Increase in monitoring frequency
    - Review of possible causes (existing sources of unknown contamination or contamination that may be attributed to construction)
    - Prepare a qualitative assessment of risk
- Action – Where an exceedance of a SSTV is identified, then:
    - Investigate and implement appropriate management activities
    - Conduct additional investigations to determine if remedial response is required (refer to Section 7.9.1 of the SWMP).

6.2 Groundwater quality

Groundwater quality monitoring will be carried out at a combination of existing and proposed baseline monitoring bores. Bore locations and proposed frequency of sampling are shown on Figures 6.1 to 6.4. An indication of the proposed construction groundwater monitoring program is provided in Table 6-1, with a full list of wells to be sampled and rationale for inclusion provided in Table A1, Annexure A. Additional sampling from bores that monitor cross passages will be undertaken prior to, during and after cross passage construction, rather than monitored through the project.

The construction monitoring program is to be updated once all baseline data as detailed in Section 5.2 has been collected and reviewed.

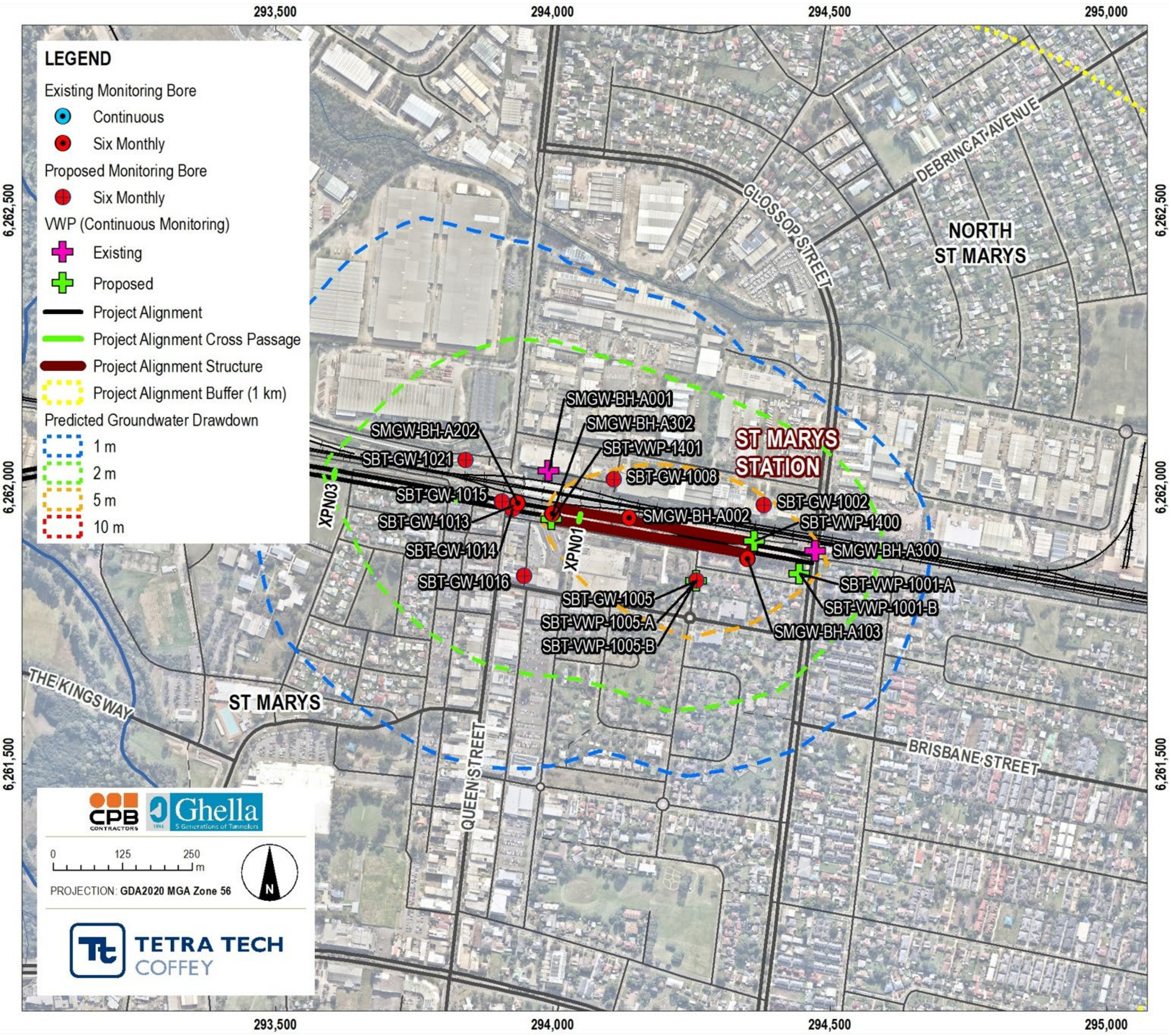

Figure 6-1: Construction groundwater monitoring program – St Marys Station

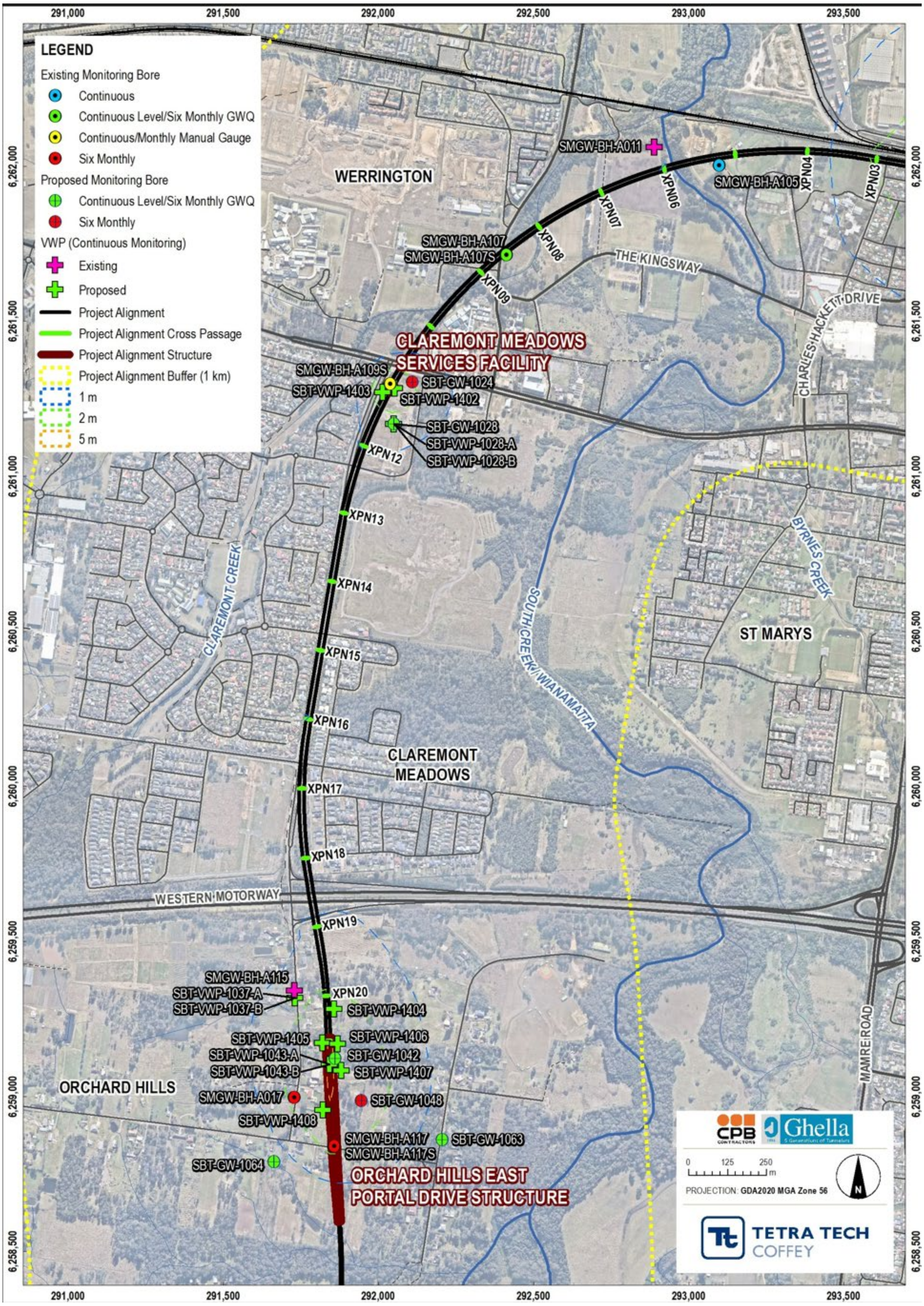

Figure 6-2: Construction groundwater monitoring program – South Creek to Orchard Hills Station

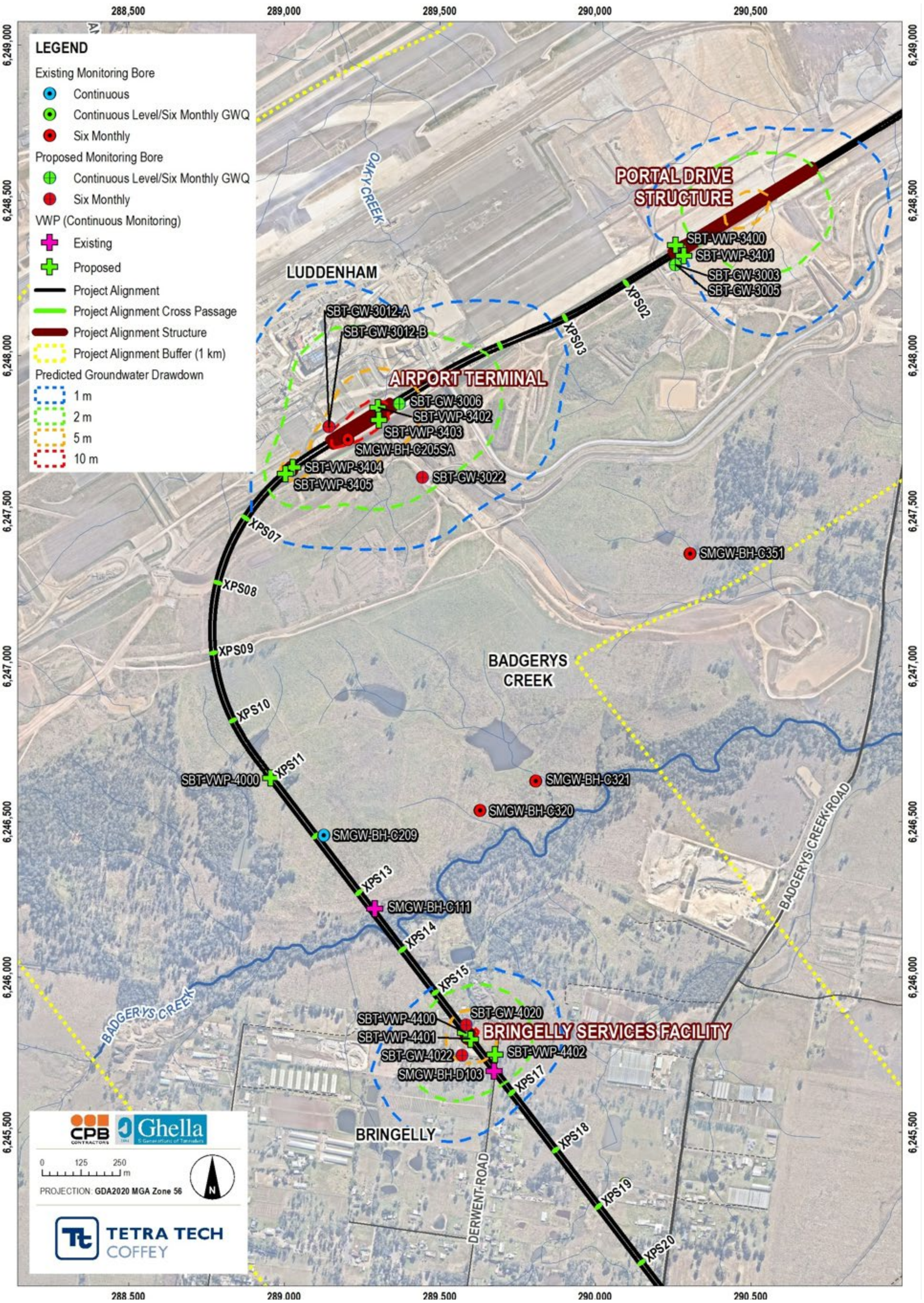

Figure 6-3: Construction groundwater monitoring program – WSI and Bringelly Services Facility

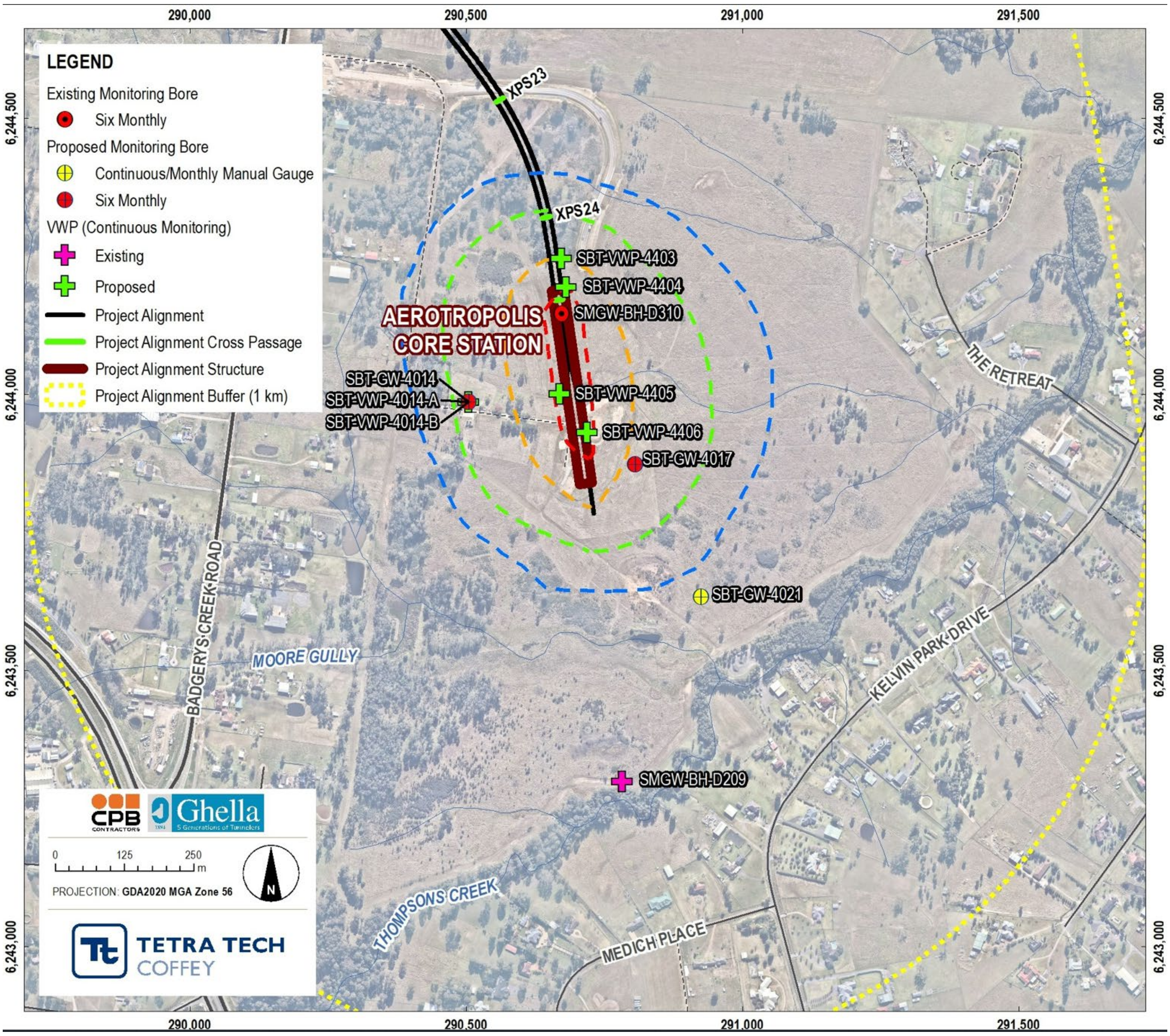

Figure 6-4: Construction groundwater monitoring program – Aerotropolis Core Station

Table 6-3: Groundwater bores to be monitored for water quality during construction

Location description	Bore ID	Easting MGA2020	Northing MGA2020	Status	Monitoring frequency
St Marys Station	SBT-GW-1021	293843	6262048	Proposed	Six monthly
St Marys Station	SBT-GW-1008	294110	6262013	Proposed	Six monthly
St Marys Station	SBT-GW-1015	293908	6261973	Proposed	Six Monthly
St Marys Station	SBT-GW-1012	293930	6261973	Proposed	TBD
St Marys Station	SMGW-BH-A202	293937	6261970	Existing	Six monthly
St Marys Station	SBT-GW-1002	294381	6261967	Proposed	Six monthly
St Marys Station	SBT-GW-1013	293928	6261966	Proposed	Six monthly
St Marys Station	SBT-GW-1014	293927	6261959	Proposed	Six monthly
St Marys Station	SMGW-BH-A302	293999	6261951	Existing	Six Monthly
St Marys Station	SMGW-BH-A002	294138	6261944	Existing	Six Monthly
St Marys Station	SBT-GW-1016	293948	6261839	Proposed	Six monthly
St Marys Station	SBT-GW-1005	294259	6261830	Proposed	Six monthly
TBM Tunnel - St Marys	SMGW-BH-A103	294351	6261870	Existing	Six monthly
TBM Tunnel - South Creek	SMGW-BH-A107	292413	6261713	Existing	Six monthly
TBM Tunnel - South Creek	SMGW-BH-A107S	292413	6261713	Existing	Six monthly
Claremont Meadows Services facility	SBT-GW-1024	292109	6261303	Proposed	Six Monthly
Claremont Meadows Services Facility	SMGW-BH-A109S	292037	6261297	Existing	Six monthly
Claremont Meadows Services facility shaft	SBT-GW-1028	292050	6261168	Proposed	Six Monthly
Orchard Hills Station	SBT-GW-1041	291860	6259122	Proposed	Six monthly
Orchard Hills Station	SMGW-BH-A017	291728	6258996	Existing	Six Monthly
Orchard Hills Station	SBT-GW-1048	291945	6258986	Proposed	Six Monthly
Orchard Hills Station	SMGW-BH-A117S	291857	6258839	Existing	Six Monthly
Orchards Hill Station	SMGW-BH-A117	291855	6258838	Existing	Six Monthly
Orchard Hills Station	SBT-GW-1063	292205	6258860	Proposed	Six monthly
Orchard Hills Station	SBT-GW-1064	291663	6258788	Proposed	Six monthly
Portal / Cross passage XPS01	SBT-GW-3003	290258	6248292	Proposed	Six monthly
Portal / Cross passage XPS03	SBT-GW-3005	290258	6248292	Proposed	Six monthly

Location description	Bore ID	Easting MGA2020	Northing MGA2020	Status	Monitoring frequency
Airport terminal	SBT-GW-3006	289371	6247845	Proposed	Six monthly
Airport terminal	SBT-GW-3012-A	289144	6247771	Proposed	Six Monthly
Airport terminal	SBT-GW-3012-B	289144	6247771	Proposed	Six Monthly
WSI	SMGW-BH-C205SA	289205	6247730	Existing	Six monthly
Airport terminal	SBT-GW-3022	289444	6247608	Proposed	Six monthly
WSI	SMGW-BH-C351	290304	6247361	Existing	Six monthly
WSI	SMGW-BH-C321	289809	6246630	Existing	Six monthly
WSI	SMGW-BH-C320	289629	6246535	Existing	Six monthly
Bringelly Services Facility	SBT-GW-4020	289585	6245845	Proposed	Six Monthly
Bringelly Services Facility	SBT-GW-4022	289572	6245747	Proposed	Six monthly
Aerotropolis Station	SMGW-BH-D310	290672	6244145	Existing	Six monthly
Aerotropolis Station	SBT-GW-4014	290504	6243986	Proposed	Six monthly
Aerotropolis Station	SBT-GW-4017	290796	6243883	Proposed	Six Monthly
Aerotropolis Station	SBT-GW-4021	290925	6243633	Proposed	Six monthly

Groundwater quality monitoring will include measuring field water quality parameters (EC, pH, redox, dissolved oxygen and temperature) and collection of groundwater samples for testing at a NATA accredited laboratory. The following laboratory analytical suite is proposed for six monthly sampling events:

- Dissolved metals (arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, zinc) (field filtered)

Additional analytes may also be tested for selected bores if contamination is identified in the additional baseline investigations, or a source is known or suspected to be nearby:

- Nutrients (ammonia, nitrate, mitrite, total kieldahl nitrogen, total nitrogen, total phosphorous, reactive phosphorous)
- Total recoverable hydrocarbons (TRH)
- Benzene, toluene, ethylbenzene, xylene (BTEX)
- Polycyclic aromatic hydrocarbons (PAHs)
- Semi-volatile organic compounds (SVOCs)
- Volatile organic compounds (VOCs)
- PFAS.

Recognising the potential contamination associated with the Gipps Street Landfill, atmospheric monitoring for landfill gases will also be undertaken during the monitoring of bores in Claremont Meadows (SBT-GW-1024, SMGW-BH-A109S and SBT-GW-1028). Based on the outcomes of the atmospheric monitoring, a broader analytical suite may be established and incorporated into the groundwater monitoring program.

Additional detail on analytical testing is provided in Section 7.8.

Six monthly groundwater sampling events for the construction monitoring bore network is considered sufficient as the timing for changes in water quality is expected to be greater than six months. The frequency of sampling and analysis required will be reviewed based on the assessed risk when the baseline assessment is complete. This may include increasing the frequency of monitoring to detect changes in risk associated with migration of contaminants, so that potential risks can be managed and mitigated, or a decrease in frequency where analytes are below the limit of detection.

The groundwater monitoring network and program will be refined during construction based on the observed groundwater responses to construction activities and ongoing development and recalibration of the groundwater model.

The proposed construction groundwater monitoring program is suitable for identification of potential groundwater quality issues as bores have been targeted along the alignment where model predicted drawdown has been identified.

6.2.1 Groundwater quality performance criteria

Available data shows that some groundwater quality parameters exceed initial screening criteria based on:

- ANZECC/ARMCANZ 2000 relevant physical and chemical stressors
- ANZG (2018) 95% species protection criteria for freshwater water, with criteria for toxicants known to bioaccumulate assessed based on the 99% species protection criteria
- Perfluoro-octane sulfonate (PFOS) and Polyfluoro Hexane Sulphanate (PFHxS) criteria of 0.13 ug/L, and perfluorooctanoic acid (PFOA) criteria of 220 ug/L, 95% species protection values PFAS National Environmental Management Plan (NEMP 2.0)
- Australian Standard AS2159 – 2009 Piling design and installation have also been considered to assess potential groundwater aggressivity risks posed by groundwater to underground concrete and steel structures (discussed in Section 20.2 of the HIR).

The screening criteria above will be applied as the performance criteria for groundwater discharge unless an EPL is in force (refer Section 1.6). Noting that some background concentrations (particularly heavy metals) exceed the above criteria, site-specific trigger values (SSTVs) will be developed following completion of additional baseline groundwater level and quality monitoring. SSTVs will be developed by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme.

In addition to ecosystems risk due to discharge of groundwater, volatile organic compounds (VOCs) in groundwater can also present a potential vapour intrusion risk in an urban environment. A gap in the existing baseline data was identified for a number of analytes including VOCs, particularly associated with the former dry cleaner on the alignment to the west of St Marys Station. Additional investigation is proposed to assess the nature and extent of chlorinated hydrocarbon impact in this area as outlined in Section 5.2.

Additional analysis for VOCs along the alignment in existing and proposed groundwater monitoring bores is also proposed where data is currently unavailable. Proposed additional bores also include for targeting the area between the former dry cleaner and St Marys Station so that contaminant migration can be monitored and compared to modelled predictions (monitoring locations SBT-GW-1013 to SBT-GW-1015, refer Figure 6-1).

If VOCs are detected and assessed as a potential risk based on the additional baseline data collected, a risk monitoring framework for vapour intrusion will be adopted as per the flowchart in Figure 6-5. The framework will be used to develop SSTVs to identify where existing conditions have been changed by project activities, and an adverse change in risk may have occurred.

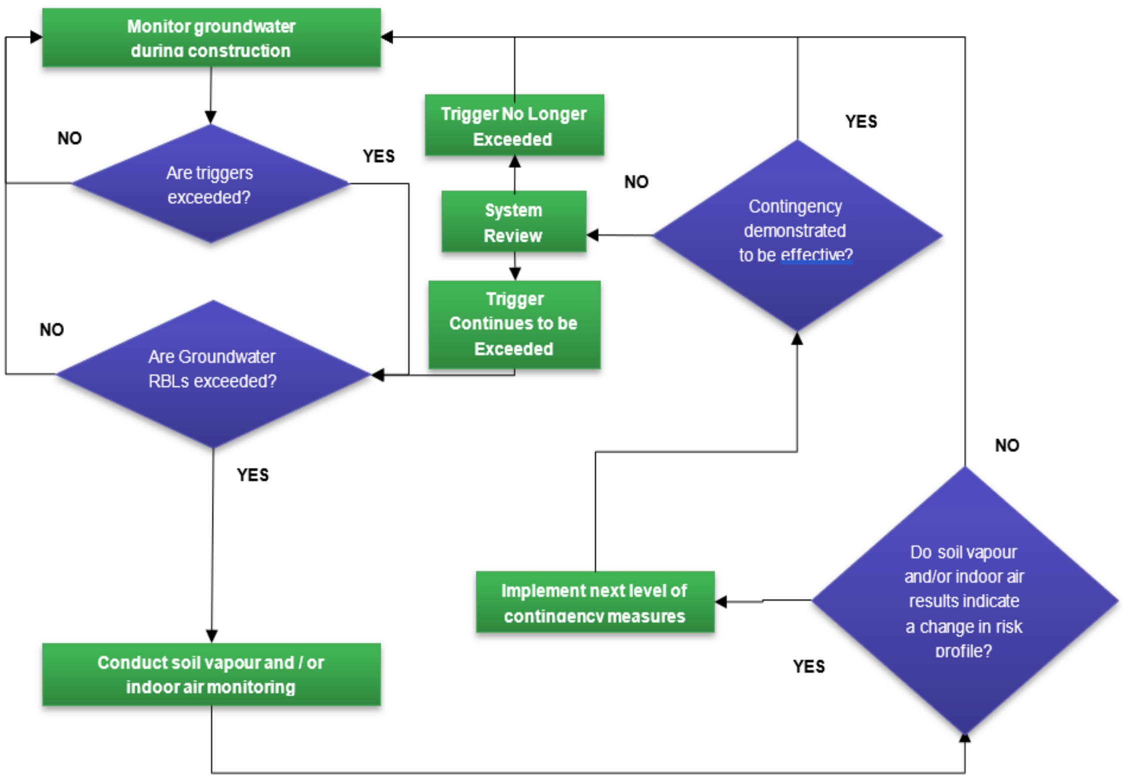

Figure 6-5: Vapour intrusion risk decision pathway

No existing potential vapour intrusion risks have been identified based on baseline data previously collected, and therefore no SSTVs for VOCs have been developed.

Consistent with the approach adopted for GDEs (Section 6.1.1), any SSTVs developed will include the following response levels:

- Alert – Concentration of analytes is within 10% of the SSTV which will lead to:
  - Increase in monitoring frequency
  - Review of possible causes (existing sources of unknown contamination or contamination that may be attributed to construction)
  - Prepare a qualitative assessment of risk
- Action – Where an exceedance of a SSTV is identified, then:
  - Investigate and implement appropriate management activities
  - Conduct additional investigations to determine if remedial response is required (refer to Section 7.9.1 of the SWMP).

6.3 Tunnel inflows and water treatment plant monitoring

Inflows to the WTPs at St Marys, Claremont Meadows, Bringelly Services Facility and Aerotropolis Core will be derived primarily through groundwater inflows to excavations that extend below the water table, with additional inflows from rainfall events that result in incidental rainfall over the excavation footprints, and any washdown activities within the catchment of the WTPs.

Inflows to the WTPs at Orchard Hills will include a combination of groundwater inflows to the station excavations and tunnels during construction, process water from tunnelling activities and surface works, incidental rainfall over the excavation footprints, and any washdown activities within the catchment of the WTPs.

Daily inflow volumes for groundwater, process water, washdown water and incidental rainfall will be highly variable over the course of the construction activities in response to both progression of the project and natural variability. Variability in flow will be managed through the influent balance tanks of each WTP.

Incidental rainfall into excavations is unlikely to generate significant volumes of additional inflow to WTPs and will be managed through the onsite WTPs, remaining site stormwater falling outside of WTP capture zones will be stored and treated through stormwater management systems (including sediment ponds).

Process water volumes contributing to inflows at Orchard Hills are anticipated to increase from <1 L/s to a peak 5 L/s over the course of construction activities.

Additional inflows from rainfall will be highly variable in response to variable intensity-duration and antecedent soil conditions. However, additional inflows from rainfall are considered unlikely to exceed the treatment capacity of the WTPs.

A summary of the range and average inflow rates for groundwater and process water are summarised in Table 6-4.

Table 6-4: WTP Groundwater Inflow and Process Water Summary

Site Location	Groundwater Inflow Range (L/s)	Average Groundwater Inflow (L/s)	Process Water Inflow Range (L/s)
St Marys	0.0 – 0.21	0.19	0.0
Claremont Meadows	0.0 – 0.26	0.24	0.0
Orchard Hills	0.0 – 1.78	0.40	0.1 – 5.0
Bringelly	0.0 – 0.31	0.29	0.0
Aerotropolis	0.0 – 0.21	0.18	0.0

CPBG are proposing to undertake a program of ongoing water quality monitoring at each WTP to provide an ongoing assessment of effluent water quality and potential risks to the Water Quality Objectives in receiving waterways.

The proposed monitoring program will provide monitoring data for effluent water quality retained within the storage tank prior to discharge, including:

1. Live continuous monitoring of pH and turbidity
2. Field monitoring of electrical conductivity
3. Monthly and quarterly sampling and laboratory testing for the parameters listed in Table 7-2 (Section 7.8.2) against the relevant ANZECC / ANZG (2018) 95% and 99% species protection criteria.

All laboratory testing will be undertaken to quantify contaminants at levels commensurate with comparison against the adopted discharge criteria and ANZECC (2000) and ANZG (2018) default guideline values. Contaminants for which practical quantification limits (PQL) are greater than default guideline values will be noted within each monitoring report.

7 Monitoring methodology

7.1 Overview

This section details the groundwater monitoring methodology to be implemented during the SBT Works. Procedures for the collection of continuous and discrete groundwater monitoring data are provided, including all quality assurance / quality control requirements. Specifically, this methodology provides an approach for collection and assessment of the following environmental datasets:

- Groundwater level as mBTOC groundwater and mAHD (measurement and datalogger download)
- Groundwater salinity as electrical conductivity (measurement and datalogger download)
- Groundwater quality at key locations (field measurement and sample collection)
- WTP discharge water quality (field measurement and sample collection)
- Groundwater inflows (collection of pump flow meter data).

The methodology also provides quality assurance / quality control procedures for collecting and managing environmental datasets.

The groundwater sampling methodology has been developed for compliance with the following Australian and International Standards and Guidance:

- AS/NZS 5667.11:1998: Water Quality – Sampling Part 11: Guidance on Sampling of Groundwaters (Reconfirmed 2016)
- AS/NZS 5667.1:1998: Water Quality – Sampling Part 1: Guidance on the Design of Sampling Programs, Sampling Techniques and the Preservation and Handling of Samples (Reconfirmed 2016)
- Sundaram, B., Feitz, A., Caritat, P. de, Plazinska, A., Brodie, R., Coram, J. and Ransley, T., 2009. Groundwater Sampling and Analysis – A Field Guide. Geoscience Australia, Record 2009/27 95 pp.

7.2 Continuous Groundwater Monitoring

Continuous groundwater monitoring will be undertaken to monitor for changes to groundwater conditions during the SBT Works. The continuous monitoring infrastructure will include a combination of vibrating wire piezometers and standard monitoring bores fitted with dataloggers. The monitoring and data collection methodology for each are discussed in further detail below.

7.2.1 Vibrating Wire Piezometers

The vibrating wire piezometers (VWPs) that form a part of the groundwater monitoring network for the project are identified in Section 5, Figure 5.2 and shown on Figures 6-1 to 6-4.

VWPs are used to monitor porewater pressure and can also be used to monitor water levels. The VW piezometer converts water pressure to a frequency signal via a diaphragm, a tensioned steel wire, and an electromagnetic coil.

The piezometer is designed so that a change in pressure on the diaphragm causes a change in tension of the wire. An electro-magnetic coil is used to excite the wire, which then vibrates at its natural frequency. The vibration of the wire in the proximity of the coil generates a frequency signal that is transmitted to the readout device.

The readout or data logger stores the reading in Hz. Modern data logger readouts may also automatically convert the reading in Hz to a pressure or level reading when a suitable pre-calibration is used. For non-vented piezometers, barometric pressure corrections are required because the space inside the piezometer isolated and disconnected from the atmosphere. Vented piezometers designed to eliminate barometric effects, and as such barometric pressure corrections are not required.

Further details on using piezometers to monitor water pressure (level) can be found in USBR 6515, along with available instruction manuals for specific VWP sensors.

VWPs will be set to record data at a maximum interval of once every six hours. VWP monitoring data will be downloaded and reviewed on a reviewed on a weekly basis to assess changes in groundwater levels during the initial construction stages of the project for all excavations, including cross-passages, and as TBM operations progress along the alignment. All data will be downloaded directly from the readouts by manual collection.

Results from repeat monitoring rounds will be collated into continuous data graphs to show any trends in groundwater levels over time and infer any trends that may be attributable to construction activities.

7.2.2 Standpipe Piezometers

The standpipe piezometers (standard monitoring bores) that form a part of the groundwater monitoring network for the project are identified in Section 6 and Figures 6.1 to 6.4.

Select standpipe piezometers will be fitted with temperature-level-conductivity (TLC) data-loggers for the continuous measurement of groundwater levels and electrical conductivity of groundwater for GDE monitoring, and level monitoring (detailed in Table 6-1).

TLC data-loggers will be set at a depth lower than the predicted minimum water table elevation, accounting for natural variations and artificially induced drawdown. Nominally TLC sensors shall be set within the screened interval for accurate assessment of groundwater salinity.

The TLC data-loggers will be set to recorded data at a maximum interval of every six (6) hours, or hourly for GDE monitoring locations. Monitoring data will be downloaded and reviewed monthly for GDE monitoring, and six monthly for other locations to assess changes in groundwater levels and EC during the construction stages of the project. All data will be downloaded directly from the readouts by manual collection.

The static groundwater level will be measured and recorded at each standpipe piezometer using an oil/water interface probe to verify the continuous data recorded by dataloggers and identify any non-aqueous phase liquid (NAPL) contamination. The methodology for the manual measurement of groundwater levels is summarised in Section 7.3.

7.3 Manual groundwater level measurements

Discrete interval groundwater level monitoring will be undertaken on a regular basis where groundwater is sampled for the construction groundwater monitoring (identified in Section 6 and Figure 6.1 to 6.4) to collect information on groundwater conditions during construction stages of the project.

Groundwater levels will be measured and recorded at all relevant standpipe piezometers using an oil-water interface probe. Measurements collected using the interface probe will be used to verify / calibrate any continuous data collected by data-loggers and check for the presence of any hydrocarbon Light non-aqueous phase liquids (LNAPL) and dense non-aqueous phase liquids (DNAPL).

The level (to the nearest millimetre) of groundwater and LNAPL / DNAPL (if present) will be referenced to a known (and consistent) surveyed point at the top of the bore casing (mTOC). This measurement will be corrected to mAHD using survey data.

Recorded groundwater level will be tabulated in both metres below top of bore casing (mBTOC) and mAHD. The base of the bore will be measured and recorded on each manual groundwater monitoring event by lowering the dipper to the base of the bore until it touches the bottom, where possible

LNAPL product layers will be present as an oil-product layer on top of the groundwater level. DNAPL is determined by lowering the probe to the base of the well.

All groundwater level monitoring will be carried out prior to any purging and sampling activities (where applicable).

7.4 Groundwater Sampling

The purpose of groundwater sampling is to retrieve a water sample that represents the characteristics of water below the ground surface. There are a number of methods that can be adopted to collect representative groundwater samples, including but not limited to:

- Borehole purging
- Low-flow sampling
- Passive sampling
- Hydrasleeve sampling.

The sampling methodology selected for the groundwater monitoring program is discussed in the following sections.

7.4.1 Sampling Methodology

The groundwater monitoring program will adopt a low-flow sampling methodology for the collection of all groundwater samples at all sites identified in Section 5 and Figures 5.5 to 5.8. The low-flow sampling methodology employs specifically designed sample pumps. ASTM D6771-21 provides the standard practice for low-flow purging and sampling used for groundwater monitoring.

The principle behind this method is to extract formation water through the bore screen (or slotted interval) at approximately the same rate as ambient groundwater flow, without disturbing the stagnant water column above. This is achieved by pumping at a rate which results in minimal drawdown of the water level within the bore.

Devices used to recover samples using the low-flow methodology may include peristaltic (suction lift) pumps, piston pumps, and/or bladder pumps.

A Standard Operating Procedure (SOP) that is compliant with AS/NZS 5667.11:1998 will be developed and adhered to for all low-flow sampling operations. The SOP will include requirement for positioning the intake of the low-flow tubing at the depth of the aquifer that is contributing formation water to the standpipe piezometer.

Field measurements of physical parameters include electrical conductivity, pH, temperature, dissolved oxygen, and reduction-oxidation potential shall be collected prior to sampling using the methodology summarised in Section 7.4. The drawdown should not exceed 10 cm difference from the original SWL at any time. However, it is more important that the groundwater quality parameters stabilise before sampling.

The results from baseline assessment (Section 5.2) will be used to identify any locations with significant contamination risks, with water quality samples submitted for all testing parameters identified in Table 7-2.

7.4.2 Field Measurements

Some physicochemical parameters cannot be reliably measured in the laboratory as their characteristics change over a very short time scale. Parameters that should thus be measured in the field include pH, electrical conductivity (EC), temperature, dissolved oxygen (DO), redox potential (Eh) and alkalinity.

Other observations including odour, colour and indications of gross contamination will also be recorded on field logging sheets

Field parameters should be measured in a flow cell using a multiparameter probe (water quality metre) to avoid contact between the groundwater and the atmosphere. Readings of field parameters should be recorded at a minimum of every three (3) minutes (where sampling rate is 100ml/minute or more) or five minutes (if flow rate is less than 100ml/minute) until parameters have stabilized.

Once the SWL stabilises wait for three successive stable parameter readings (at 3-to-5-minute interval between each successive reading) before sampling. Criteria for the acceptance of stable water quality parameters are summarised in Table 7-1.

Table 7-1: Example Criteria Defining Stabilisation of Water Quality Parameters

Type of Quality Control Sample	Control Limit
Dissolved Oxygen	±10% of reading or ±0.2mg/L
Temperature	±0.2°C
pH	±0.2 pH units
Electrical Conductivity	±3% of reading
Redox Potential	±20 mV

The pump tubing should be disconnected from the flow-through-cell, following stabilisation and prior to sample collection, so that the samples are collected from the pump's discharge tubing without contact with the flow-through-cell. Air pressure on the gas cylinder can be turned down so samples can be filled with minimal turbulence (if applicable).

A Standard Operating Procedure (SOP) that is compliant with AS/NZS 5667.11:1998 will be developed and adhered to for all low-flow sampling operations, including the collection of field parameters.

7.5 Effluent Water Quality – Water Treatment Plant

7.5.1 In-Line Monitoring

The construction WTPs will be designed to include in-line monitoring sensors to monitor pH and turbidity prior to effluent discharge. If either parameter is out of range an alert will be sent to the WTP operator to recirculate water through the WTP until parameters are within the required range. Once parameters are within the required range, effluent will be discharged to either trade waste or the relevant receiving waterway (depending on whether the effluent is suitable for discharge to receiving waterways under the EPL conditions).

7.5.2 Sampling Methodology

Grab samples will be collected manually from the WTP locations once a month to verify that water from the WTPs remain below the criteria identified in Table 7-6. The volume of sample collected will be sufficient for the required physico-chemical (field) parameter analysis using a multi-probe water quality meter(s).

An SOP will be developed to provide a consistent methodology in collection of samples from each WTP.

7.5.3 Field Measurements

Field physico-chemical parameters including temperature, EC, pH, DO, and turbidity will be measured at each sampling location using a calibrated multi-probe hand-held water quality meter immediately prior to collection of water quality samples. The collection of field measurements should follow a similar approach to that of field parameters collected from groundwater monitoring bores (Section 7.4.2).

Other observations including odour, colour and indications of gross contamination will also be recorded on field logging sheets.

7.6 Field Notes

Field notes for each monitoring location will be recorded on appropriate field sheets (hard copy or digital). Details to be recorded on field notes include:

- Unique sampling identification nomenclature consisting of the sample date, location, and sampler details.
- Stable readings from field parameter testing
- Observations of contamination including odour, colour and indications of gross contamination
- Weather conditions at the time of sampling or field investigation
- Any other relevant observations which may affect field or laboratory testing results.

7.7 Field Quality Assurance / Quality Control

7.7.1 Sampling Records

The following information will be included with the results from water quality monitoring:

a. The date(s) on which the sample was taken

b. The time(s) at which the sample was collected

c. The point at which the sample was taken (location ID)

d. The name of the person who collected the sample

7.7.2 Decontamination Procedures

All non-disposable sampling equipment will be decontaminated before and between sampling events to reduce the potential for cross contamination to occur between samples. Decontamination will include the following procedure:

- Washing non-disposable sampling equipment in a solution of phosphate free detergent (e.g. Liquinox) and potable water
- Rinsing with distilled water
- Rinsing with water from sample location prior to sample collection.

7.7.3 Field Method Blanks

One field method blank will be collected for each sampling round. The field method blank will be used to assess potential for cross contamination from the use of any non-disposable equipment that may be used in the sampling process. The field method blank will be collected by rinsing non-disposable sampling equipment with distilled water (following decontamination procedures) and collecting rinse water in the required laboratory testing containers. Field method blanks will not be required where sampling is conducted without the use of non-disposable equipment.

7.7.4 Intra-Laboratory Duplicates

Intra-laboratory field duplicates will be collected on an average frequency of one sample per ten samples collected (10%), with a minimum of one per batch (excluding samples collected for asbestos analysis). The analytical results of the two spilt samples will be compared to assess the precision of the sampling protocol, and provide an indication of variability in the sample source. The relative percentage difference (RPD) acceptance limits will be:

- No limit analytical results <10 times Level of reporting (LOR)
- 50% analytical results 10-20 times LOR
- 30% analytical results >20 times LOR.

The RPD exceedances (if any) will be assessed to determine whether the project DQO's can still be addressed. If not, then further sampling and/or analysis may be required.

7.7.5 Inter-laboratory Duplicates (Triplicates)

Inter-laboratory field duplicates will be collected on an average frequency of one sample per twenty samples collected (5%) with a minimum of one per batch (excluding samples collected for asbestos analysis). The analytical results of the two spilt samples will be compared to assess the precision of the sampling protocol and provide an indication of variability in the sample source. The relative percentage difference (RPD) acceptance limits will be:

- No limit analytical results <10 times LOR
- 50% analytical results 10-20 times LOR
- 30% analytical results >20 times LOR.

RPD exceedances (if any) will be assessed and whether the project data quality objectives (DQO) can still be addressed. If not, then further sampling and/or analysis may be required.

7.7.6 Trip Blanks

Trip blanks will be used and analysed for a batch of samples provided to the laboratory. The trip blank will be analysed for all primary sample analytes except for turbidity, TSS, and major ions.

The acceptance limit shall be the detected concentrations in the trip blank, are less than the applicable LOR. The significance of acceptance limit exceedances will be assessed and whether the project DQO's can still be addressed. If not, then further sampling and/or analysis may be required.

7.8 Laboratory Selection and Water Quality Testing Parameters

7.8.1 Laboratory Selection

The primary and secondary laboratories used for this project will be NATA-accredited for the analyses being undertaken.

7.8.2 Laboratory Testing Parameters

All water quality samples will be scheduled for analysis of the parameters identified in Table 7-2 at the nominated NATA accredited testing laboratory, at the specified testing frequency.

Sampling frequencies will be increased to quarterly sampling in the event that laboratory testing results identify any exceedances of the screening criteria in Section 7.12. Increased sampling frequencies will only apply to boreholes where the criteria exceedances are recorded.

Table 7-2: Laboratory Testing Regime – Interim Water Quality Sampling

Parameter Suite	Parameter	Testing Frequency (refer Section 6 for individual bores)
General water quality	Electrical conductivity, pH, carbonate alkalinity, bicarbonate alkalinity, hydroxide alkalinity, TDS, total organic carbon.	Six monthly
Major ions	Calcium, magnesium, sodium, potassium, chloride, sulfate)	Six monthly
Dissolved metals (ultra-trace)	Aluminium, arsenic III, arsenic V cadmium, chromium III, chromium VI, cobalt, copper, lead, iron, manganese, mercury, nickel, zinc	Six monthly
Total metals (ultra-trace)	Ferric (Fe^{3+}), ferrous (Fe^{2+}), manganese (Mn^{2+})	Six monthly
Petroleum hydrocarbons	TPH fractions >C6-C40	Six monthly
Select nutrients (ultra-trace)	Total nitrogen, total Kjeldahl nitrogen, nitrate, nitrite, total ammonia (NH_3, NH_4^+), total phosphorous, reactive phosphorous	Six monthly
Aromatic hydrocarbons	Benzene, toluene, ethylbenzene, xylene, naphthalene	Six monthly
Polycyclic aromatic hydrocarbons	All relevant ANZG (2018) PAH compounds	Six monthly (select locations)
Volatile organic compounds	All relevant ANZG (2018) VOC compounds	Six monthly (select locations)
Semi-volatile organic compounds	All relevant ANZG (2018) VOC compounds	Six monthly (select locations)
Organochlorine pesticides	All relevant ANZG (2018) OCP compounds	Six monthly (select locations)
Organophosphorus pesticides	All relevant ANZG (2018) OPP compounds	Six monthly (select locations)
Perfluorinated alkyl substances	All relevant NEMP PFAS compounds	Six monthly (select locations)

Quality assurance / quality control samples will be scheduled for testing of all parameters except for the general water quality suite and major ions.

7.8.3 Sample Filtration and Preservative Requirements

The proposed sample filtration and preservative requirements for the laboratory testing parameters are presented in Table 7-3. Filtration should be carried out in the filed for all samples unless otherwise specified so that results are representative of dissolved concentrations.

Table 7-3: Sample Filtration and Preservative Requirements

Analyte Suite	Field Filtration	Preservative
General Water Quality	Not Required	Not required

Analyte Suite	Field Filtration	Preservative
Select Nutrients (Ultra-Trace)	0.45µm	Sulfuric acid (H_2SO_4)
Dissolved Metals (Ultra-Trace)	0.45µm	Not required
Dissolved Iron Species (Ultra-Trace)	0.45µm	Hydrochloric acid (HCl)
Dissolved Arsenic Species (Ultra Trace)	0.45µm	Hydrochloric acid (HCl)
Dissolved Hexavalent Chromium (Ultra Trace)	0.45µm	Sodium hydroxide
Petroleum Hydrocarbons	Not Required	Not required
Aromatic hydrocarbons	Not Required	Not required
Polycyclic aromatic hydrocarbons	Not Required	Not required
Volatile organic compounds	Not Required	Sulfuric acid
Semi-volatile organic compounds	Not Required	Not required
Organochlorine pesticides	Not Required	Not required
Organophosphorus pesticides	Not Required	Not required
Perfluorinated alkyl substances	Not Required	Not required

7.9 Laboratory Quality Assurance / Quality Control

7.9.1 Laboratory Data Quality Indicators

The laboratory data quality will be assessed by checking the following:

- Laboratory methods used are NATA accredited
- Laboratory limits of reporting are less than adopted assessment criteria
- Samples are extracted and analysed within holding times
- Results of method blanks, surrogate, lab control sample, spike recoveries relative percentage differences (RPDs) between primary and duplicate laboratory samples.

Data Quality Indicators (DQI) that will be adopted for quality control samples are presented in Table 7-4.

Table 7-4: Sample Filtration and Preservative Requirements

Type of Quality Control Sample	Control Limit
Method blank	Analytical result < LOR
Surrogate % recovery	50% to 150%
Lab control sample % recovery	70% to 130%
Spike % recovery	70% - 130% for inorganics 60% - 140% for organics
RPD	No limit Analytical results <10 times LOR 50% Analytical results 10-20 times LOR 30% Analytical results >20 times LOR

In the event that the results of a laboratory quality control sample exceed the relevant adopted control limit, the laboratory will be requested assess the significance of the exceedance on the quality of the laboratory analytical data for the relevant batch.

The significance of the control limit exceedance will be assessed and whether the project DQO's can still be addressed. If not, then further sampling and/or analysis may be required.

7.10 Suitability of Sampling Results

If the results of the laboratory analytical data and field data quality assessment are acceptable (i.e., comply with the procedures, requirements and limits set out in Table 7-5, then the sampling data will be considered suitable for the purposes of the project. Data will be assessed for completeness, comparability, representativeness, precision, and accuracy.

Table 7-5: Sampling Data Quality Indicators

Field Considerations	Laboratory Considerations
Completeness	
All critical locations sampled All samples collected (from grid and at depth) SOPs appropriate and complied with Experienced sampler Correct documentation	All critical samples analysed in accordance with the data quality objectives All analytes analysed in accordance with the data quality objectives Appropriate methods and LORs Sample documentation complete Sample holding times compliant
Comparability	
Same SOPs used on each occasion Experienced sampler Climatic conditions (temperature, rainfall, wind) Same types of samples collected (filtered, size fractions)	Sample analytical methods used (including clean-up) Sample LORs (justify/quantify if different) Same laboratories (justify/quantify if different) Same units (justify/quantify if different)
Representativeness	
Appropriate media sampled in accordance with the data quality objectives All media identified in data quality objectives sampled	All samples analysed in accordance with the data quality objectives
Precision	
SOPs appropriate and complied with	Analysis of: • Laboratory and inter-laboratory duplicates • Feld duplicates • Laboratory-prepared volatile trip spikes
Accuracy	
SOPs appropriate and complied with	Analysis of:

Field Considerations	Laboratory Considerations
	• Feld blanks • Rinsate blanks • Reagent blanks • Method blanks • Matrix spikes • Matrix spike duplicates • Surrogate spikes • Reference materials • Laboratory control samples • Laboratory-prepared spikes

Two types of error should be considered when assessing the results from monitoring, including:

Type I error (false positive): Deciding that water quality samples exceed the environmental trigger values when they do not; and

Type II error (false negative): Deciding that water quality samples do not exceed the environmental trigger values when they do

The potential for decision errors will be managed through confidence in the reliability of assessment methods (e.g., field observations, laboratory analysis and data review) and appropriate levels of qualification and/or experience in the personnel undertaking the relevant task.

7.11 Suitably Qualified Staff

Any staff or contractors undertaking water quality sampling for the monitoring program should be suitably qualified and experienced to undertake the required activities to ensure a suitable level quality assurance / quality control in sampling results.

At a minimum staff or contractors undertaking water quality sampling must have qualifications and experience relevant to the work being undertaken and must be a current member of a professional organisation.

7.12 Screening criteria

The following screening criteria presented in Table 7-6 (based on the 95% species protection criteria provided in ANZECC (2000) and ANZG (2018) guidelines) will be used as a basis to assess the results from water quality sampling against in the context of potential environmental impacts.

The criteria in Table 6-6 are screening criteria only and do not represent water quality discharge criteria for the project. Water quality discharge criteria are being developed for the project in consultation with the NSW EPA and will be published as part of a revision for the project soil and water management plan. The 99% species protection criteria values are applied only to bioaccumulating contaminants.

An exceedance of these guideline values will trigger further investigation to assess the scale and frequency of impacts, including the relative magnitude of the exceedance and frequency of exceedance observed in environmental monitoring data.

Table 7-6: Proposed Environmental Screening Criteria

Pollutant Group	Six Monthly Sampling	Risk based locations	Screening Criteria Reference
Physical and Chemical Stressors	✓	✓	ANZECC (2000)
Metals and Metalloids	✓	✓	ANZG (2018) 95% & 99% Species Protection
Non-metallic Inorganics	✓	✓	ANZG (2018) 95% & 99% Species Protection
Aromatic Hydrocarbons	✓	✓	ANZG (2018) 95% & 99% Species Protection
Petroleum hydrocarbons	✓	✓	> Detect
Polycyclic Aromatic Hydrocarbons	x	✓	ANZG (2018) 95% & 99% Species Protection
Semi-Volatile Organic Compounds	x	✓	ANZG (2018) 95% & 99% Species Protection
Volatile Organic Compounds	x	✓	ANZG (2018) 95% & 99% Species Protection
Organochlorine Pesticides	x	✓	ANZG (2018) 95% & 99% Species Protection
Organophosphorus Pesticides	x	✓	ANZG (2018) 95% & 99% Species Protection
Perfluorinated alkyl substances	x	✓	NEMP 99% Species Protection

8 Compliance management

8.1 Roles and responsibilities and training

The CPBG organisational structure and overall roles and responsibilities are outlined in Section 4 of the CEMP. Specific responsibilities for the implementation of environmental controls are detailed in Part B of the SWMP.

All employees, contractors and utility staff working on site will undergo site induction training relating to groundwater management issues, detailed in the SWMP.

Further details regarding staff training are outlined in Section 7.8 of the CEMP.

8.2 Groundwater monitoring

Groundwater monitoring requirements are detailed in Section 6 and include the location, parameters to be monitored, analysis suite and frequency of monitoring. Groundwater monitoring methodology is summarised in Section 7.

Additional requirements and responsibilities in relation to inspections are documented in Part B of the SWMP.

8.3 Data analysis and response

Groundwater level records from data loggers will be manually compensated for barometric pressure and converted to the Project datum (m AHD). Manual groundwater level measurements will be corrected for salinity and used to validate the accuracy of continuous groundwater level records.

Groundwater level monitoring results from VWPs, data loggers and manual groundwater measurements will be compared to groundwater model predicted drawdown, and if potential adverse impacts arise as a result of this comparison, the implementation of additional mitigation measures will be considered including:

- Targeted ground improvement and grouting to limit groundwater inflows into station excavations, tunnels and cross-passage to reduce groundwater drawdown
- Design of undrained temporary retention systems to minimise groundwater inflow into station excavations and reduce groundwater drawdown
- Supplementing groundwater supply at affected groundwater dependent ecosystems or watercourses
- Make good provisions for groundwater supply wells impacted by changes in groundwater level or quality.

Local rainfall trends will be considered to assess the impacts of seasonal variability in groundwater levels during construction. Groundwater level observations will be used to inform future revision of this GWMP and groundwater model.

Groundwater quality results from monitoring bores will be compared to baseline data following each monitoring event. Trends will be reviewed to assess potential mobilisation of existing contamination due to construction. EC results from data loggers will be compared to SSTVs following data collection and if required, inform the implementation of any mitigation measures. Additional SSTVs for VOCs may be developed if proposed baseline sampling identifies potential vapour intrusion risk.

Water treatment plant sample results will be compared with discharge criteria monthly and reported in the six-monthly groundwater report as detailed in Soil and Water CEMP Sub-plan.

8.4 Auditing

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental controls, and compliance with this GWMP, the SSI 10051 Planning Approval, and other relevant approvals, licences and guidelines.

Audit requirements are detailed in Section 9.4 of the SWMP.

8.5 Reporting and records

8.5.1 Reporting

The SWMP details the reporting and record keeping requirements and processes, and complaints management and reporting. Reporting requirements specific to the groundwater monitoring program are presented in Table 8-1.

Detailed periodic review and reporting of groundwater level and quality will be conducted during construction, with particular focus during early excavation below the groundwater level. Groundwater level and quality results will be compared to baseline results and adopted performance criteria. Monitoring reports will be submitted to DPE Water, Sydney Water (where required) and Sydney Metro within 60 days of the reporting period unless otherwise agreed with DPE Water.

Project reporting requirements are summarised in Table 8-1.

Table 8-1: Groundwater monitoring reporting schedule

Reporting timing / frequency	Reporting requirement	Report recipient
Groundwater Review Report	A review report will be prepared to document results of the first three months of monitoring new bores. This report will recommend monitoring frequency and analytical suites for construction monitoring, and updates to the GWMP. Selected bores will continue with six monthly monitoring for construction as outlined in Section 6, with the monitoring frequency of the remaining bores and the analytical suite will be reviewed based on the results of baseline assessment monitoring.	DPE Water, Planning Secretary, ER, Sydney Water, NSW EPA (if requested)
Groundwater Monitoring Report (six-monthly)	Construction groundwater level and quality monitoring reports will include data collected during the reporting period. The report will include comparison of observed levels to model predictions and groundwater quality to SSTV and baseline data. A summary of construction status and inflow during the reporting period will be presented. A summary of WTP discharge compliance will be presented. The operation of groundwater management measures during the reporting period will be summarised and the requirement for any additional management measures will be documented. If connection to a Sydney Water asset is required, then the reporting of the data collected under C16(L) would be provided as required by Sydney Water.	DPE Water, Planning Secretary, ER, Sydney Water, NSW EPA (if requested)

Where the EPL, once agreed, has additional requirements for reporting results, these will be added to this SWMP when available.

Monitoring, reporting and engagement requirements will be agreed with Sydney Water where Sydney Water assets are used to receive discharged water from the SBT Works, as part of a trade waste agreement or similar. The monitoring and reporting requirements for trade waste discharges will be included in the SWMP.

8.5.2 Records

In addition to the record keeping detailed in the SWMP, the following compliance records will be retained by CPBG:

- Records of groundwater monitoring bores and wells in the immediate vicinity of SBT Works sites (If monitoring locations change due to damage to a bore, or a bore need to be added because of the revised modelling predictions, the GWMP will be revised as noted in Section 9)
- Records of groundwater levels and water quality testing
- EPL Annual Reports
- Groundwater monitoring field sheets
- WTP operational performance data
- Laboratory records.

9 Review and Improvement

9.1 Review

Where trigger levels as set out in Section 6 are exceeded, the GWMP will be reviewed, and if necessary, revised to account for the observed conditions. This may include assessment of the appropriateness of existing trigger levels based on the observed response and inferred risk to sensitive groundwater receptors, and revision of trigger levels.

9.2 Continual improvement

Monitoring data will be reviewed throughout construction for continual improvement. Section 9.4 of the SWMP describes the process for the continual improvement of project documents.

Continual improvement of this GWMP will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets and Project performance outcomes of the EIS for the purpose of identifying opportunities for improvement.

The continual improvement process is intended to:

- Identify areas of opportunity for improvement of environmental management and performance
- Determine the cause or causes of non-conformances and deficiencies
- Develop and implement corrective and preventative action to address any non-conformances and deficiencies (refer to Part B of the SWMP and the CEMP)
- Verify the effectiveness of the corrective and preventative actions
- Document any changes in procedures resulting from process improvement
- Make comparisons with objectives and targets.

9.3 Updates to GWMP

This GWMP will be periodically reviewed and updated. A full review and update will be completed once all baseline data is available, and the review and revision frequency will be re-assessed.

There are a number of mechanisms which may trigger additional review and revision of the document:

- Receipt of new data that materially affects the interpretations that underpin the requirement for groundwater monitoring and/or management
- Completion of further modelling, where the model predictions differ significantly from those used to form the basis for the assessment of groundwater-related impacts and specification of mitigation measures (if required)
- The identification of previously unknown contaminant sources / plume(s) of contaminated groundwater that may be influenced by SBT Works.

10 References

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Annexure A Monitoring Network Summary and Figures

Location ID	Location Description	Type	Easting_GDA2020	Northing_GDA2020	UnitMonitored	Status	Elevation (mTOC) mAHD	Screen Interval (mAHD)	Baseline Water Quality/Level Data	Baseline Monitoring Required	# Baseline Sampling Events Proposed	Continuous water level monitoring	Construction Monitoring Frequency - Water Quality	Rationale for inclusion in construction monitoring
SMGW-BH-0001S	Badgerys Creek	Monitoring bore	288970	6246102		Existing	67	63 to 65	No	Yes	1		TBD	
SMGW-BH-0002	Badgerys Creek	Monitoring bore	288852	6246085		Existing	66.8	51.8 to 60.8	No	Yes	1		TBD	
SMGW-BH-A002	St Marys	Monitoring bore	294138	6261944	Bedrock	Existing	36.2	8.5 to 14.5	Yes	No			Six Monthly	Monitoring water quality at depth immediately to north of station
SMGW-BH-A011S	South Creek	Monitoring bore	292892.6	6262063.6	Alluivum	Existing	19.96	15.16 to 18.16	Yes	No				
SMGW-BH-A012	Werrington - Lethbridge Avenue	Monitoring bore	291601.8	6262452.3	Bedrock	Existing	29.45	-4.55 to 4.45	Yes	No				
SMGW-BH-A017	Orchards Hill	Monitoring bore	291728	6258996	Bedrock	Existing	43.6	19.6 to 28.6	Yes	Yes	1		Six Monthly	Monitoring water quality to west of station within drawdown zone
SMGW-BH-A019	Gipps Street	Monitoring bore	291953	6260516	Bedrock	Existing	42.2	8.2 to 14.2	Yes	No				
SMGW-BH-A102	St Marys Station	Monitoring bore	294051	6261946	Residual	Existing	36.8	28.8 to 33.8	Yes	No				
SMGW-BH-A103	TBM Tunnel - St Marys	Monitoring bore	294351	6261870	Bedrock	Existing	46.4	22.4 to 31.4	Yes	Yes	1		Six Monthly	Monitoring water quality immediately to southeast of station (early in construction only)
SMGW-BH-A105	TBM Tunnel - South Creek	Monitoring bore	293098	6262002	Bedrock	Existing	22.6	-5.4 to 7.6	Yes	No				
SMGW-BH-A105S	TBM Tunnel - South Creek	Monitoring bore	293100	6261999	Alluvium/Residual	Existing	22.6	14.6 to 20.6	Yes	No		Yes	Continuous level	Groundwater level monitoring for TBM and XPN05
SMGW-BH-A107	TBM Tunnel - South Creek	Monitoring bore	292413	6261713	Bedrock	Existing	22.5	-3.5 to 3.5	Yes	Yes	1	Yes	Continous level/ Six monthly sampling	Monitoring water level and quality at tunnel depth adjacent to Claremont Creek and during construction of XPN08/XPN09
SMGW-BH-A107S	TBM Tunnel - South Creek	Monitoring bore	292413	6261713	Residual	Existing	22.5	17.5 to 19.5	Yes	Yes	1	Yes	Continous level/ Six monthly sampling	Monitoring water level and quality at water table adjacent to Claremont Creek and During construction of XPN08/XPN09
SMGW-BH-A109	Claremont Meadows Services Facility	Monitoring bore	292038	6261300	Bedrock	Existing	27.1	2.1 to 11.1	Yes	No				
SMGW-BH-A109S	Claremont Meadows Services Facility	Monitoring bore	292037	6261297	Residual	Existing	27.4	22.4 to 23.9	Yes	Yes	1		Continuous/Monthly Manual Gauge	GDE monitoring (continuous) and six monthly water quality monitoring adjacent to facility excavation
SMGW-BH-A111	TBM Tunnel - Gipps Street	Monitoring bore	291915	6260719	Bedrock	Existing	41.7	3.7 to 12.7	Yes	No				
SMGW-BH-A113	TBM Tunnel M4	Monitoring bore	291786	6259594	Bedrock	Existing	43.4	14.4 to 23.4	Yes	Yes	1		TBD	
SMGW-BH-A117	Orchards Hill Station	Monitoring bore	291855	6258838	Bedrock	Existing	38.9	22.9 to 28.9	Yes	Yes	1		Six Monthly	Monitoring water quality in vicinity of station at depth
SMGW-BH-A117S	Orchard Hills - Landsdowne Road	Monitoring bore	291857.1	6258839.4	Residual	Existing	38.78	34.58 to 36.58	Yes	Yes	1		Six Monthly	Monitoring water quality in vicinity of station at water table (early in construction only)
SMGW-BH-A121	Claremont Meadows	Monitoring bore	291944	6260883	Bedrock	Existing	38.6	17.6 to 23.6	Yes	Yes	1		TBD	
SMGW-BH-A122	Claremont Meadows	Monitoring bore	291893	6260308	Bedrock	Existing	41.4	6.4 to 16.4	Yes	Yes	1		TBD	
SMGW-BH-A123	TBM Tunnel - Orchard Hills	Monitoring bore	291769	6260026	Bedrock	Existing	49	10 to 19	Yes	No				
SMGW-BH-A202	St. Mary's Station	Monitoring bore	293936.6	6261969.7	Bedrock	Existing	35.53	26.03 to 28.03	Yes	Yes	1		Six Monthly	Monitoring water quality to west of station within drawdown zone
SMGW-BH-A302	St Marys Station	Monitoring bore	293999.20	6261951.40	Residual/Bedrock	Existing	35.81	24.21 to 30.21	Yes	Yes	1		Six Monthly	Monitoring water quality immediately to west of station (early in construction only)
SMGW-BH-A304	A302 Bus Interchange	Monitoring bore	292037.31	6261245.82	Bedrock	Existing	27.81	12.06 to 18.06	Yes	No				
SMGW-BH-A310	Kent Road	Monitoring bore	291736.60	6259192.49	Bedrock	Existing	39.93	25.93 to 32.93	Yes	No				
SMGW-BH-A310S	Kent Road	Monitoring bore	291736.61	6259190.54	Residual	Existing	39.94	32.94 to 37.94	Yes	No				
SMGW-BH-A311	Kent Road	Monitoring bore	291738.06	6259050.54	Residual/Bedrock	Existing	43.49	34.49 to 40.49	Yes	No				
SMGW-BH-A315	40-48 Landsdowne Rd, Orchard Hills	Monitoring bore	291726.64	6258863.78	Residual/Bedrock	Existing	42.28	32.28 to 38.28	Yes	No				
SMGW-BH-A321	St Marys Station	Monitoring bore	294199.76	6261917.04	Residual/Bedrock	Existing	41.66	32.66 to 38.66	Yes	No				
SMGW-BH-A321S	St Marys Station	Monitoring bore	294200.13	6261914.64	Residual/Bedrock	Existing	41.65	32.65 to 38.65	Yes	No				
SMGW-BH-B106	Luddenham Road	Monitoring bore	291703	6256950	Alluvium	Existing	39.4	35.4 to 38.4	Yes	Yes	1		TBD	
SMGW-BH-B109	Luddenham Road	Monitoring bore	291572	6256049	Bedrock	Existing	41.5	28.5 to 32.5	Yes	Yes	1		TBD	
SMGW-BH-B120	Luddenham Road Station	Monitoring bore	290964	6253779	Bedrock	Existing	52.6	38.6 to 47.6	Yes	Yes	1		TBD	
SMGW-BH-B121	Luddenham Road Station	Monitoring bore	290940	6253451	Residual	Existing	56.6	53.6 to 54.6	No	Yes	1		TBD	
SMGW-BH-B123	Luddenham Road	Monitoring bore	290939	6253035	Bedrock	Existing	57.2	43.2 to 52.2	No	Yes	1		TBD	
SMGW-BH-B130	Elizabeth Drive	Monitoring bore	291379	6250043	Bedrock	Existing	60.3	46.3 to 55.3	Yes	Yes	1		TBD	
SMGW-BH-B308	Orchard Hills - Luddenham Road	Monitoring bore	292032.7	6257200.4	Residual	Existing	34.82	30.62 to 33.62	Yes	Yes	1		TBD	
SMGW-BH-B309	Orchard Hills - Luddenham Road	Monitoring bore	291835.5	6257202.7	Residual	Existing	35.63	30.23 to 34.73	Yes	Yes	1		TBD	
SMGW-BH-B312	Patons Ln Orchard Hills	Monitoring bore	291561.64	6255941.58	Residual	Existing	41.95	37.95 to 40.95	Yes	No				
SMGW-BH-B313	Department of Defence (DOD)	Monitoring bore	291503.63	6255514.16	Residual	Existing	38.9	34.9 to 37.9	Yes	No				
SMGW-BH-B317	Department of Defence (DOD)	Monitoring bore	291440.32	6254935.21	Residual/Bedrock	Existing	44.23	39.73 to 42.73	No	Yes	1		TBD	
SMGW-BH-B319	Orchard Hills - Warragamba pipeline	Monitoring bore	291172.90	6254263.90	Residual/Bedrock	Existing	50.02	45.22 to 48.22	Yes	Yes	1		TBD	
SMGW-BH-B320	463A Luddenham Rd Luddenham	Monitoring bore	291041.38	6254011.73	Residual	Existing	49.93	45.93 to 48.93	Yes	No				
SMGW-BH-B325	642 Luddenham Rd Luddenham	Monitoring bore	291330.72	6251967.28	Residual	Existing	48.6	44.6 to 47.6	Yes	No				
SMGW-BH-C001S	Badgerys Creek	Monitoring bore	288970.8	6246103.6	Residual	Existing	66.95	62.95 to 64.95	Yes	No				
SMGW-BH-C002	Badgerys Creek	Monitoring bore	288852.4	6246086.6	Bedrock	Existing	66.79	51.79 to 60.79	Yes	No				
SMGW-BH-C201	Western Sydney Airport	Monitoring bore	290279.2	6248347.9	Bedrock	Existing	68.71	40.11 to 55.11	Yes	Yes	1		TBD	
SMGW-BH-C201S	Western Sydney Airport	Monitoring bore	290274.3	6248344.9	Residual/Bedrock	Existing	68.77	62.87 to 65.87	Yes	No				
SMGW-BH-C205SA	Western Sydney Airport	Monitoring bore	289204.9	6247729.9	Residual/Bedrock	Existing	77.7	72.2 to 75.2	No	Yes	1		Six Monthly	Monitoring for changes to water quality to south of station during early construction
SMGW-BH-C206	Western Sydney Airport	Monitoring bore	288838.3	6247416.3	Bedrock	Existing	81.61	54.61 to 60.61	Yes	Yes	1		TBD	
SMGW-BH-C207	Western Sydney Airport	Monitoring bore	288773.1	6247042.2	Bedrock	Existing	88.76	50.76 to 59.76	No	Yes	1		TBD	

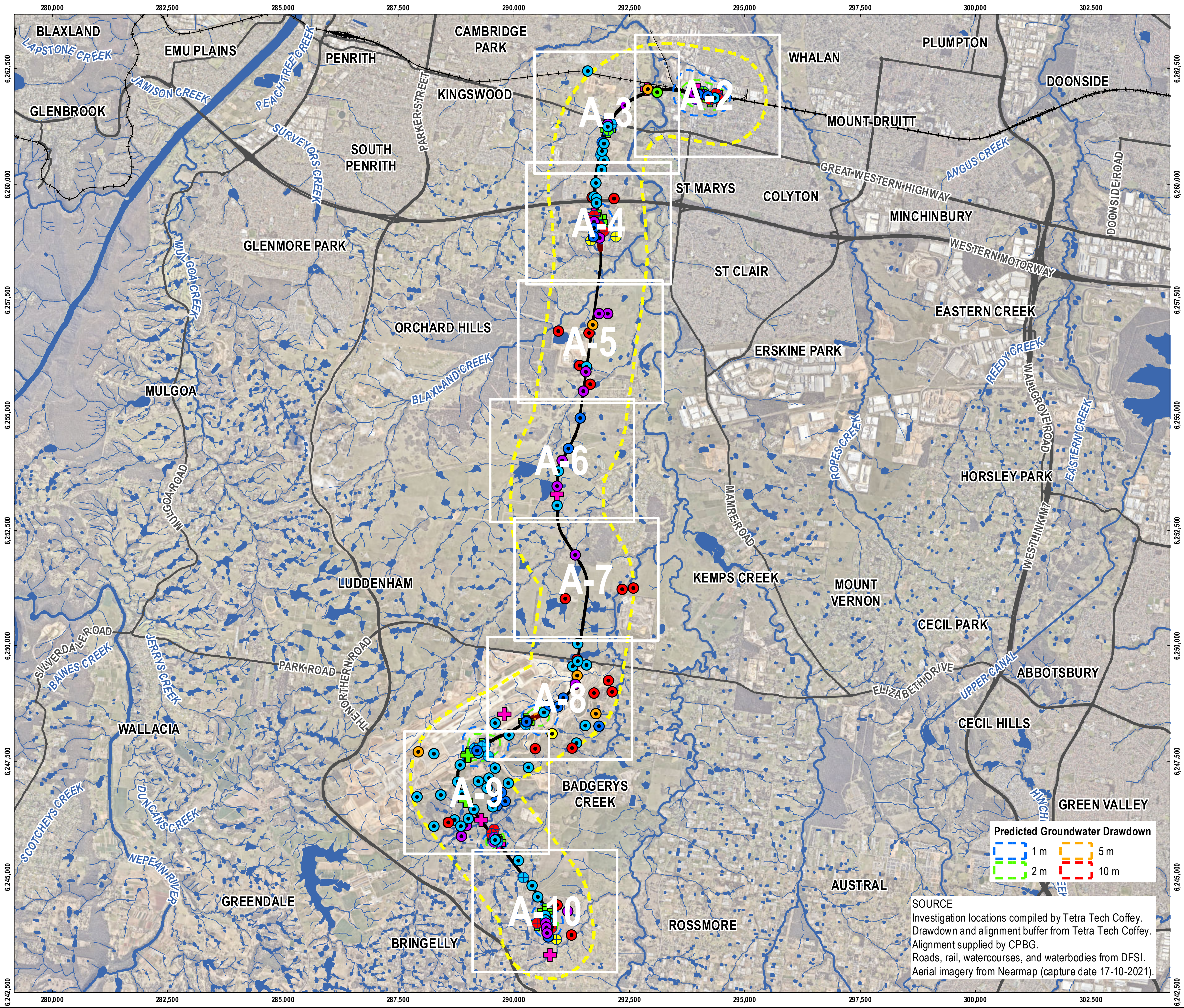
Location ID	Location Description	Type	Easting_GD A2020	Northing_GD A2020	UnitMonitored	Status	Elevation (mTOC) mAHD	Screen Interval (mAHD)	Baseline Water Quality/Level Data	Baseline Monitoring Required	# Baseline Sampling Events Proposed	Continuous water level monitoring	Construction Monitoring Frequency - Water Quality	Rationale for inclusion in construction monitoring
SMGW-BH-C208	Western Sydney Airport	Monitoring bore	288877.5	6246773.6	Bedrock	Existing	79.46	39.16 to 48.16	Yes	Yes	1		TBD	
SMGW-BH-C209	Western Sydney Airport	Monitoring bore	289127.8	6246455.3	Bedrock	Existing	75.44	46.24 to 55.24	Yes	Yes	1	Yes	Continuous	Monitor level for TBM and construction of XPS12
SMGW-BH-C301	WSA CIZ	Monitoring bore	291370.06	6249348.61	Alluvium	Existing	58.98	54.98 to 57.98	Yes	No				
SMGW-BH-C302	WSA CIZ	Monitoring bore	291326.20	6249156.77	Residual	Existing	62.46	58.46 to 61.46	Yes	No				
SMGW-BH-C303	WSA CIZ	Monitoring bore	291075.33	6248861.45	Residual/Bedrock	Existing	60.15	54.65 to 58.65	No	Yes	1		TBD	
SMGW-BH-C304	WSA CIZ	Monitoring bore	290944.82	6248669.22	Residual/Bedrock	Existing	63.77	58.27 to 62.27	Yes	No				
SMGW-BH-C305	WSA CIZ	Monitoring bore	290761.57	6248715.06	Residual/Bedrock	Existing	63.04	56.54 to 60.54	Yes	No				
SMGW-BH-C320	WSA NON-CIZ	Monitoring bore	289629.26	6246534.88	Residual/Bedrock	Existing	66.47	57.47 to 63.47	Yes	Yes	1		Six Monthly	Monitoring water quality impacts downgradient of proposed spoil management area
SMGW-BH-C321	WSA NON-CIZ	Monitoring bore	289808.56	6246630.03	Residual/Bedrock	Existing	63.45	57.45 to 61.95	Yes	Yes	1		Six Monthly	Monitoring water quality impacts downgradient of proposed spoil management area
SMGW-BH-C322	WSA NON-CIZ	Monitoring bore	289595.12	6246615.34	Residual/Bedrock	Existing	69.01	63.01 to 67.51	Yes	No				
SMGW-BH-C324	WSA NON-CIZ	Monitoring bore	289732.80	6246812.80	Residual/Bedrock	Existing	67.78	57.78 to 63.78	No	Yes	1			
SMGW-BH-C325	WSA NON-CIZ	Monitoring bore	289414.14	6246913.69	Bedrock	Existing	74.38	64.38 to 67.38	Yes	No				
SMGW-BH-C330	WSA NON-CIZ	Monitoring bore	289535.07	6246506.55	Bedrock	Existing	69.35	60.35 to 66.35	No	Yes	1		TBD	
SMGW-BH-C331	WSA NON-CIZ	Monitoring bore	289220.15	6247059.82	Bedrock	Existing	78.71	70.21 to 76.21	Yes	No				
SMGW-BH-C332	WSA NON-CIZ	Monitoring bore	289459.40	6247135.20	Bedrock	Existing	81.83	72.83 to 77.83	No	Yes	1		TBD	
SMGW-BH-C340	WSA NON-CIZ	Monitoring bore	291541.84	6248270.03	Bedrock	Existing	62.13	40.13 to 49.13	Yes	No				
SMGW-BH-C341	WSA NON-CIZ	Monitoring bore	291848.11	6248250.90	Residual/Bedrock	Existing	53.18	44.08 to 50.08	Yes	No				
SMGW-BH-C343	WSA NON-CIZ	Monitoring bore	291350.97	6247890.32	Bedrock	Existing	58.62	47.12 to 53.12	Yes	No				
SMGW-BH-C351	WSA NON-CIZ	Monitoring bore	290304.48	6247361.42	Residual/ Bedrock	Existing	67.96	57.96 to 63.96	Yes	No			Six Monthly	Monitoring water quality impacts in vicinity of proposed spoil management area
SMGW-BH-D109	Aerotropolis	Monitoring bore	290714.9	6243825.3	Bedrock	Existing	72.6	52.6 to 61.6	Yes	Yes	1		TBD	
SMGW-BH-D109S	Aerotropolis	Monitoring bore	290715.8	6243821.2	Bedrock	Existing	72.4	63.45 to 66.45	Yes	Yes	1		TBD	
SMGW-BH-D205	Aerotropolis - Bringelly	Monitoring bore	290390.4	6244793.9	Bedrock	Existing	79.3	51.3 to 57.3	Yes	Yes	1	Yes	Continous level/ WQ sampling during XP construction	Monitor level for TBM and level and quality during construction of XPS22
SMGW-BH-D206	Aerotropolis - Bringelly	Monitoring bore	290513.1	6244560.3	Bedrock	Existing	79.15	51.15 to 57.15	Yes	Yes	1		TBD	
SMGW-BH-D207	Aerotropolis - Bringelly	Monitoring bore	290718	6244026.4	Bedrock	Existing	70.13	59.13 to 62.13	Yes	Yes	1		TBD	
SMGW-BH-D208	Aerotropolis - Bringelly	Monitoring bore	290742.5	6243690.5	Residual/Bedrock	Existing	67.87	63.77 to 66.87	Yes	Yes	1		TBD	
SMGW-BH-D303	40 Derwent Road Bringelly	Monitoring bore	289600.52	6245800.76	Bedrock	Existing	72.85	63.35 to 68.35	Yes	No				
SMGW-BH-D303S	40 Derwent Road Bringelly	Monitoring bore	289598.88	6245794.26	Bedrock	Existing	73.23	61.63 to 67.63	Yes	No				
SMGW-BH-D305	220 Badgerys Creek Road Bringelly	Monitoring bore	290097.20	6245334.42	Bedrock	Existing	68.89	53.14 to 59.14	Yes	No		Yes	Continous level/ WQ sampling during XP construction	Monitor level for TBM and level and quality during construction of XPS18 and 19
SMGW-BH-D308	Aerotropolis	Monitoring bore	290714.79	6243914.26	Residual/Bedrock	Existing	73.35	64.35 to 70.35	Yes	No				
SMGW-BH-D310	Aerotropolis	Monitoring bore	290672.46	6244145.44	Bedrock	Existing	71.55	62.55 to 68.55	Yes	Yes	1		Six Monthly	Monitoring for changes to water quality to north of station during construction
SMGW-BH-D322	Aerotropolis	Monitoring bore	290676.65	6244059.85	Bedrock	Existing	72.12	62.12 to 68.12	Yes	No				
SMGW-BH-D324	Aerotropolis	Monitoring bore	290694.89	6243992.13	Residual	Existing	71.23	67.23 to 70.23	Yes	No				
SMGW-BH-D326	Aerotropolis	Monitoring bore	290704.10	6243891.98	Residual	Existing	74.18	70.18 to 73.18	Yes	No				
SMGW-BH-D329	Aerotropolis	Monitoring bore	290720.07	6243765.46	Residual	Existing	69.19	65.19 to 68.19	Yes	No				
SMGW-GW01	St Marys	Monitoring bore	293863.6	6261984.7	Residual	Existing	35.12	27.62 to 30.62	?	Yes - multiple depths	1		TBD	Assess chlorinated concentrations in shallow groundwater at Queen St Dry Cleaner
SMGW-GW02	St Marys	Monitoring bore	293887.3	6261984	Residual	Existing	35.39	27.39 to 30.39	?	Yes - multiple depths	1		TBD	Assess chlorinated concentrations in shallow groundwater at Queen St Dry Cleaner
WSA GW04	Western Sydney International	Monitoring bore	288574	6246161		Existing	74.3	54.3 to 57.3	Yes	No				
WSA GW06	Western Sydney International	Monitoring bore	288413	6246761	Bedrock	Existing	88.3	68.3 to 71.3	Yes	No				
WSA GW07	Western Sydney International	Monitoring bore	288413	6246761	Bedrock	Existing	88	78 to 81	Yes	No				
WSA GW08	Western Sydney International	Monitoring bore	289013	6246245	Bedrock	Existing	67.8	57.8 to 60.8	Yes	No				
WSA GW0S	Western Sydney International	Monitoring bore	288574	6246161		Existing	74	64 to 67	No	Yes	1		TBD	
WSA GW16	Western Sydney International	Monitoring bore	290461	6247764		Existing	78.1	68.1 to 71.1	Yes	No				
WSA GW19	Western Sydney International	Monitoring bore	291738	6248976		Existing	58.3	48.3 to 51.3	Yes	No				
WSA GW20	Western Sydney International	Monitoring bore	292130	6249000	Bedrock	Existing	48.1	28.1 to 31.1	Yes	No				
WSA GW21	Western Sydney International	Monitoring bore	292130	6249000		Existing	48.1	38.1 to 41.1	Yes	No				
WSA GW23	Western Sydney International	Monitoring bore	291265	6247780		Existing	59	49 to 52	Yes	No				
SBT-BH-3006	Airport terminal	Monitoring bore	289371	6247845	Bedrock	Proposed	79	44 to 50	No	Yes	1	Yes	Continous level/ Six monthly sampling	Water quality monitoring to east of station during construction
SBT-BH-3009	Airport terminal	Monitoring bore	289303	6247803	Bedrock	Proposed	81	to 41	No	Yes	1		TBD	
SBT-BH-4005	Bringelly Services Facility	Monitoring bore	289652	6245743	Bedrock	Proposed	74	to 38	No	Yes	1		TBD	

Location ID	Location Description	Type	Easting_GD A2020	Northing_GD A2020	UnitMonitored	Status	Elevation (mTOC) mAHD	Screen Interval (mAHD)	Baseline Water Quality/Level Data	Baseline Monitoring Required	# Baseline Sampling Events Proposed	Continuous water level monitoring	Construction Monitoring Frequency - Water Quality	Rationale for inclusion in construction monitoring
SBT-BH-4008	Cross passage / Tunnel	Monitoring bore	290209	6244977	Bedrock	Proposed	75	43 to 49	No	Yes	1	Yes	Continous level/ WQ sampling during XP construction	For monitoring during TBM operation/XPS20 and XPS21 construction
SBT-BH-4019	Aerotropolis Station	Monitoring bore	290701	6243877	Bedrock	Proposed	72	42 to 52	No	Yes	1		TBD	
SBT-CM-1030	Cross passage / Tunnel (XPN13)	Monitoring bore	291905	6260908	Residual/Bedrock	Proposed	35	29 to 33	No	Yes	1		As required	For monitoring during TBM operation/XP construction
SBT-GW-1001	St Marys Station	Monitoring bore	294446	6261843		Proposed	49	41 to 47	No	Yes	1		TBD	
SBT-GW-1002	St Marys Station	Monitoring bore	294381	6261967	-	Proposed	44	36 to 42	No	Yes	1		Six Monthly	Monitoring water quality downgradient of former industrial sites and sub station on south of Harris Street within drawdown zone
SBT-GW-1005	St Marys Station	Monitoring bore	294259	6261830		Proposed	44	36 to 42	No	Yes	1		Six Monthly	Monitoring water quality at the water table to the southeast of the station within the drawdown zone
SBT-GW-1008	St Marys Station	Monitoring bore	294110	6262013	Residual/Alluvium	Proposed	36	28 to 34	No	Yes	1		Six Monthly	Water quality monitoring downgradient of former industrial sites on south of Harris Street, to north of station and within drawdown zone
SBT-GW-1012	St Marys Station	Monitoring bore	293929.56	6261972.54	Residual	Proposed	37	29.5 to 34.5	No	Yes	1		TBD	Monitoring well between Dry Cleaner and Station to monitor contaminant mobilisation due to Station excavation
SBT-GW-1013	St Marys Station	Monitoring bore	293928.05	6261965.85	Residual	Proposed	37	29.5 to 34.5	No	Yes	1		Six Monthly	Monitoring well between Dry Cleaner and Station to monitor contaminant mobilisation due to Station excavation
SBT-GW-1014	St Marys Station	Monitoring bore	293927.2	6261959.2	Residual	Proposed	37	29.5 to 34.5	No	Yes	1		Six Monthly	Monitoring well between Dry Cleaner and Station to monitor contaminant mobilisation due to Station excavation
SBT-GW-1015	St Marys Station	Monitoring bore	293908.2	6261973.4	Residual	Proposed	36	26 to 32	No	Yes	1		Six Monthly	Sentinel well immediately to east of Dry Cleaner to monitor contaminant mobilisation due to Station excavation, and compare to predictions.
SBT-GW-1016	St Marys Station	Monitoring bore	293948	6261839	Residual	Proposed	37	27 to 32	No	Yes	1		Six Monthly	Monitoring to assess changes in water quality downgradient of former drycleaner and service station within predicted station drawdown zone
SBT-GW-1018	St Marys Station	Monitoring bore	293888	6261978	Residual	Proposed	35	22 to 25	No	Yes	1		TBD	Multi-level well to assess migration of chlorinated hydrocarbon impact
SBT-GW-1019	St Marys Station	Monitoring bore	293888	6261978	Bedrock	Proposed	35	17 to 20	No	Yes	1		TBD	Multi-level well to assess migration of chlorinated hydrocarbon impact
SBT-GW-1020	St Marys Station	Monitoring bore	293832	6261980	Residual	Proposed	35	24 to 27	No	Yes	1		TBD	Monitoring downgradient of Dry Cleaner and during construction of XPN2
SBT-GW-1021	St Marys Station	Monitoring bore	293843	6262048	Residual/Alluvium	Proposed	35	27 to 33	No	Yes	1		Six Monthly	Water quality monitoring downgradient of former industrial sites on southern side of Harris Street within predicted drawdown zone
SBT-GW-1022	St Marys Station	Monitoring bore	293861	6261977	Residual	Proposed	34	22 to 25	No	Yes	1		TBD	Monitoring downgradient of Dry Cleaner to inform attenuation for modelling predictions
SBT-GW-1024	Claremont Meadows Services Facility	Monitoring bore	292109	6261303	Bedrock	Proposed	29	17 to 26	No	Yes	1		Six Monthly	Shallow well to assess conditions downgradient of possible historical service station (and confirm no impact from existing service stations
SBT-GW-1028	Claremont Meadows Services Facility	Monitoring bore	292050	6261168	Residual/Alluvium	Proposed	31	25 to 28	No	Yes	1	Yes	Continuous/Monthly Manual Gauge	Level and groundwater EC monitoring to assess potential impact to GDE to west
SBT-GW-1031	Cross passage / Tunnel (XPN14)	Monitoring bore	291880.17	6260639.75	Bedrock	Proposed	41	21 to 26	No	Yes	1		As required	For monitoring during TBM operation/XP construction
SBT-GW-1037	Orchard Hills Station	Monitoring bore	291731	6259318		Proposed	40	32 to 38	No	Yes	1		TBD	
SBT-GW-1042	Orchard Hills Station	Monitoring bore	291860	6259122	-	Proposed	40	32 to 38	No	Yes	1	Yes	Continuous/Monthly Manual Gauge	GDE monitoring (continuous) and six monthly water quality monitoring downgradient of suspected sheep/cattle dip on alignment at Orchard Hills station
SBT-GW-1043	Orchard Hills Station	Monitoring bore	291842	6259102		Proposed	49	41 to 47	No	Yes	1		TBD	
SBT-GW-1048	Orchard Hills Station	Monitoring bore	291945	6258986	-	Proposed	40	32 to 38	No	Yes	1		Six Monthly	Downgradient of AEC25 where uncontrolled filling has occurred close to Orchard Hill station site
SBT-GW-1063	Orchard Hills Station	Monitoring bore	292205	6258860	Alluvium/Bedrock	Proposed	34	23 to 32	No	Yes	1	Yes	Continuous/Monthly Manual Gauge	Level and groundwater EC monitoring to assess potential impact to GDE to east
SBT-GW-1064	Orchard Hills Station	Monitoring bore	291663	6258788	Alluvium/Bedrock	Proposed	44	30 to 42	No	Yes	1	Yes	Continuous/Monthly Manual Gauge	Level and groundwater EC monitoring to assess potential impact to GDE to east
SBT-GW-3003	Portal / Cross passage XPS01	Monitoring bore	290258	6248292		Proposed	66	61 to 64	No	Yes	1	Yes	Continous/Six Monthly	For level and quality monitoring during Portal excavation and XP construction
SBT-GW-3004	Portal / Cross passage XPS01	Monitoring bore	290258	6248292	Bedrock	Proposed	66	53 to 56	No	Yes	1			
SBT-GW-3005	Portal / Cross passage XPS01	Monitoring bore	290258	6248292	Bedrock	Proposed	66	44 to 47	No	Yes	1	Yes	Continous/Six Monthly	For level and quality monitoring during Portal excavation and XP construction
SBT-GW-3012-A	Airport terminal	Monitoring bore	289144	6247771	Bedrock	Proposed	75	67 to 73	No	Yes	1		Six Monthly	Monitor effects of drawdown associated with construction
SBT-GW-3012-B	Airport terminal	Monitoring bore	289144	6247771	Bedrock	Proposed	75	59 to 65	No	Yes	1		Six Monthly	Monitor effects of drawdown associated with construction
SBT-GW-3012-C	Airport terminal	Monitoring bore	289144	6247771	Bedrock	Proposed	75	49 to 55	No	Yes	1			
SBT-GW-3022	Airport terminal	Monitoring bore	289444	6247608	Bedrock?	Proposed	78	63 to 75	No	Yes	1		Six Monthly	Monitoring groundwater quality and level during construction as no existing wells to the south of Station.

Table A.1
SBT WSA Groundwater Monitoring Plan
Groundwater Monitoring Network Summary

Location ID	Location Description	Type	Easting_GD A2020	Northing_GD A2020	UnitMonitored	Status	Elevation (mTOC) mAHD	Screen Interval (mAHD)	Baseline Water Quality/Level Data	Baseline Monitoring Required	# Baseline Sampling Events Proposed	Continuous water level monitoring	Construction Monitoring Frequency - Water Quality	Rationale for inclusion in construction monitoring
SBT-GW-4002	Bringelly Services Facility	Monitoring bore	289571	6246020	-	Proposed	67	60 to 65	No	Yes	1		TBD	Downgradient of suspected source area in drawdown area of Bringelly Services facility
SBT-GW-4003	Bringelly Services Facility	Monitoring bore	289507	6245924	-	Proposed	69	62 to 67	No	Yes	1		TBD	Downgradient of suspected source area in drawdown area of Bringelly Services facility
SBT-GW-4014	Aerotropolis Station	Monitoring bore	290504	6243986		Proposed	77	63 to 72	No	Yes	1		Six Monthly	Monitoring water quality to west of station within drawdown zone
SBT-GW-4017	Aerotropolis Station	Monitoring bore	290806	6243873	-	Proposed	71	59 to 69	No	Yes	1		Six Monthly	Monitoring for changes in water quality due to impact from USTs and other potential source site features
SBT-GW-4020	Aerotropolis Station	Monitoring bore	289585	6245845		Proposed	72	56 to 68	No	Yes	1		Six Monthly	Monitor water quality and level to north of Station within predicted drawdown extent (replacement for SMGW-BH-D303 which will be destroyed)
SBT-GW-4021	Aerotropolis Station	Monitoring bore	290925	6243633	Alluvium/Bedrock	Proposed	65	54 to 63	No	Yes	1	Yes	Continuous/Monthly Manual Gauge	Groundwater level and EC monitoring to assess potential impact to GDE to southeast.
SBT-GW-4022	Aerotropolis Station	Monitoring bore	289572	6245747		Proposed	76	60 to 72	No	Yes	1		Six Monthly	Monitoring groundwater quality and level to south of station as existing wells will be either destroyed or become dry.
1990_Coff_D10	Western Sydney International	Monitoring bore	289886	6248066	Bedrock	Unknown condition	88	78 to 88	No	Yes - if located	1		TBD	
1990_Coff_D12	Western Sydney International	Monitoring bore	291270	6249548	Bedrock	Unknown condition	59	48.5 to 59	No	Yes - if located	1		TBD	
1990_Coff_D13	Western Sydney International	Monitoring bore	290822	6248092	Alluvium/Bedrock	Unknown condition	73.5	63.15 to 73.5	No	Yes - if located	1		TBD	
1990_Coff_D5	Western Sydney International	Monitoring bore	288261	6247663	Bedrock	Unknown condition	102.5	82 to 102.5	No	Yes - if located	1		TBD	
1990_Coff_D6	Western Sydney International	Monitoring bore	287900	6246723	Bedrock	Unknown condition	112.9	87.8 to 112.9	No	Yes - if located	1		TBD	
1990_Coff_D7	Western Sydney International	Monitoring bore	288258	6246085	Bedrock	Unknown condition	79.4	69.05 to 79.4	No	Yes - if located	1		TBD	
1990_Coff_D9	Western Sydney International	Monitoring bore	289591	6247340	Bedrock	Unknown condition	87.5	77.25 to 87.5	No	Yes - if located	1		TBD	
2018_JK_BH-D-161	Western Sydney International	Monitoring bore	292042	6249246		Unknown condition	48.2	38.2 to 43.2	No	Yes - if located	1		TBD	
BB01	Aerotropolis	Monitoring bore	290737	6243959	Bedrock	Unknown condition	71.8	59.8 to 65.8	No	Yes - if located	1		TBD	
BB02	Aerotropolis	Monitoring bore	290753	6243957	Bedrock	Unknown condition	71.7	59.7 to 65.7	No	Yes - if located	1		TBD	
BB03	Aerotropolis	Monitoring bore	290750	6243952	Bedrock	Unknown condition	71.9	59.9 to 65.9	No	Yes - if located	1		TBD	
BB114	Aerotropolis	Monitoring bore	290808	6244063	Bedrock	Unknown condition	67.7	55.7 to 61.7	No	Yes - if located	1		TBD	
BB116	Aerotropolis	Monitoring bore	291171	6244247	Residual	Unknown condition	63.3	57.3 to 60.3	No	Yes - if located	1		TBD	
BH05	OHE - St Marys	Monitoring bore	291691	6259715		Unknown condition	56.6	47.6 to 50.6	No	Yes - if located	1		TBD	
BH09	OHE - St Marys	Monitoring bore	291732	6259731	Bedrock	Unknown condition	54.6	42.6 to 51.6	No	Yes - if located	1		TBD	
BH1	St Marys	Monitoring bore	293870	6261971	Residual	Unknown condition	35.5	29.5 to 32.5	No	Yes - if located	1		TBD	
BH117	M12	Monitoring bore	291107	6251013		Unknown condition	65.1	52.7 to 58.7	No	Yes - if located	1		TBD	
BH119	M12	Monitoring bore	291372	6249710		Unknown condition	54	41.9 to 47.9	No	Yes - if located	1		TBD	
BH14	OHE - St Marys	Monitoring bore	291788	6259692	Bedrock	Unknown condition	49.6	40.6 to 43.6	No	Yes - if located	1		TBD	
BH17	OHE - St Marys	Monitoring bore	292165	6259690		Unknown condition	50.9	41.9 to 44.9	No	Yes - if located	1		TBD	
BH207	M12	Monitoring bore	292342	6251217		Unknown condition	40	22.1 to 34.1	No	Yes - if located	1		TBD	
BH209	M12	Monitoring bore	292587	6251246		Unknown condition	39.4	21.2 to 38.9	No	Yes - if located	1		TBD	
BH-C-01	Western Sydney International	Monitoring bore	287923	6247697	Alluvium	Unknown condition	54.2	49.2 to 53.7	No	Yes - if located	1		TBD	
BH-C-05	Western Sydney International	Monitoring bore	291773	6248524	Alluvium	Unknown condition	59.3	47.3 to 54.3	No	Yes - if located	1		TBD	
BH-C-08	Western Sydney International	Monitoring bore	291569	6249582	Bedrock	Unknown condition	57.6	45.6 to 53.6	No	Yes - if located	1		TBD	
BH-R-01	Western Sydney International	Monitoring bore	291387	6249658	Bedrock	Unknown condition	55.7	35.7 to 41.7	No	Yes - if located	1		TBD	
BH-R-08	Western Sydney International	Monitoring bore	290643	6248549	Bedrock	Unknown condition	61.5	31.5 to 37.5	No	Yes - if located	1		TBD	
BH-R-21	Western Sydney International	Monitoring bore	289222	6247676	Bedrock	Unknown condition	78.6	60.1 to 66.1	No	Yes - if located	1		TBD	
BH-R-34	Western Sydney International	Monitoring bore	288713	6246218	Bedrock	Unknown condition	71.1	61.1 to 67.1	No	Yes - if located	1		TBD	
BH-R-42	Western Sydney International	Monitoring bore	289880	6247019	Bedrock	Unknown condition	81.3	57.3 to 63.3	No	Yes - if located	1		TBD	
F Deep	Western Sydney International	Monitoring bore	288859	6245870	Bedrock	Unknown condition	69.9	39.6 to 42.6	No	Yes - if located	1		TBD	
F Shallow	Western Sydney International	Monitoring bore	288859	6245870	Residual	Unknown condition	69.9	63.9 to 66.9	No	Yes - if located	1		TBD	
GW105054	Luddenham Rd - OHE	Monitoring bore	291424	6256068		Unknown condition	0	to -210	No	Yes - if located	1		TBD	
GW105382	Luddenham Rd - OHE	Monitoring bore	291651	6255672		Unknown condition	0	to -252	No	Yes - if located	1		TBD	
GW110454	Luddenham Rd - OHE	Monitoring bore	290961	6256815		Unknown condition	0	to -30.3	No	Yes - if located	1		TBD	
GW110455	Luddenham Rd - OHE	Monitoring bore	291628	6256774		Unknown condition	42.2	to -2.2	No	Yes - if located	1		TBD	
K	Western Sydney International	Monitoring bore	289587	6248317	Bedrock	Unknown condition	72	39.7 to 42.7	No	Yes - if located	1		TBD	
MW02	Aerotropolis	Monitoring bore	291241	6243734		Unknown condition	61.5	55.5 to 58.5	No	Yes - if located	1		TBD	
MW1	St Marys	Monitoring bore	293889	6261976		Unknown condition	0	-7.3 to -4.3	No	Yes - multiple depths	1		TBD	
MW2	St Marys	Monitoring bore	293887	6261983		Unknown condition	0	-7.3 to -4.3	No	Yes - multiple depths	1		TBD	
MWO1	Aerotropolis	Monitoring bore	290928	6244381		Unknown condition	68.1	62.1 to 65.1	No	Yes - if located	1		TBD	
BH-D-174	WSI	VWP	290297	6249365	Alluvium	Existing	81.6	-		Yes - if located	-		TBD	
BH-D-174	WSI	VWP	290297	6249365	Bedrock	Existing	81.6	-		Yes - if located	-		TBD	
BH-D-175	500m WNW of Portal dive structure	VWP	289796	6248515	Bedrock	Existing	81.4	-		Yes - if located	-		TBD	
BH-D-175	500m WNW of Portal dive structure	VWP	289796	6248515	Residual	Existing	81.4	-		Yes - if located	-		TBD	
SMGW-BH-A001	St Marys	VWP	293993	6262029	Residual	Existing	34.4	-	Yes	-	-		Continuous	

Location ID	Location Description	Type	Easting_GD A2020	Northing_GD A2020	UnitMonitored	Status	Elevation (mTOC) mAHD	Screen Interval (mAHD)	Baseline Water Quality/Level Data	Baseline Monitoring Required	# Baseline Sampling Events Proposed	Continuous water level monitoring	Construction Monitoring Frequency - Water Quality	Rationale for inclusion in construction monitoring
SMGW-BH-A001	St Marys	VWP	293993	6262029	Bedrock	Existing	34.4	-	Yes	-	-		Continuous	
SMGW-BH-A001	St Marys	VWP	293993	6262029	Bedrock	Existing	34.4	-	Yes	-	-		Continuous	
SMGW-BH-A001	St Marys	VWP	293993	6262029	Bedrock	Existing	34.4	-	Yes	-	-		Continuous	
SMGW-BH-A011	South Creek	VWP	292889.4	6262062.3	Residual	Existing	20.1	-	Yes	-	-		Continuous	Monitoring levels during TBM and construction of XPN06
SMGW-BH-A011	South Creek	VWP	292889.4	6262062.3	Bedrock	Existing	20.1	-	Yes	-	-		Continuous	Monitoring levels during TBM and construction of XPN06
SMGW-BH-A011	South Creek	VWP	292889.4	6262062.3	Bedrock	Existing	20.1	-	Yes	-	-		Continuous	Monitoring levels during TBM and construction of XPN06
SMGW-BH-A011	South Creek	VWP	292889.4	6262062.3	Bedrock	Existing	20.1	-	Yes	-	-		Continuous	
SMGW-BH-A115	Orchard Hills	VWP	291729	6259341	Bedrock	Existing	40.4	-	Yes	-	-		Continuous	
SMGW-BH-A115	Orchard Hills	VWP	291729	6259341	Bedrock	Existing	40.4	-	Yes	-	-		Continuous	
SMGW-BH-A115	Orchard Hills	VWP	291729	6259341	Bedrock	Existing	40.4	-	Yes	-	-		Continuous	
SMGW-BH-A300	St Marys	VWP	294474.3	6261884.8	Residual	Existing	38.21	-	Yes	-	-		Continuous	
SMGW-BH-A300	St Marys	VWP	294474.3	6261884.8	Bedrock	Existing	38.21	-	Yes	-	-		Continuous	
SMGW-BH-B122	Luddenham Road	VWP	290940	6253280	Bedrock	Existing	59	-	Yes	-	-		Continuous	
SMGW-BH-B122	Luddenham Road	VWP	290940	6253280	Bedrock	Existing	59	-	Yes	-	-		Continuous	
SMGW-BH-C111	Western Sydney Airport	VWP	289291.8	6246220.6	Alluvium	Existing	65.8	-	Yes	-	-		Continuous	Monitoring levels during construction of XPS13 and XPS14
SMGW-BH-C111	Western Sydney Airport	VWP	289291.8	6246220.6	Bedrock	Existing	65.8	-	Yes	-	-		Continuous	Monitoring levels during construction of XPS13 and XPS14
SMGW-BH-C111	Western Sydney Airport	VWP	289291.8	6246220.6	Bedrock	Existing	65.8	-	Yes	-	-		Continuous	Monitoring levels during construction of XPS13 and XPS14
SMGW-BH-D103	Derwent Road	VWP	289676	6245697	Bedrock	Existing	74.7	-	Yes	-	-		Continuous	
SMGW-BH-D103	Derwent Road	VWP	289676	6245697	Bedrock	Existing	74.7	-	Yes	-	-		Continuous	
SMGW-BH-D103	Derwent Road	VWP	289676	6245697	Bedrock	Existing	74.7	-	Yes	-	-		Continuous	
SMGW-BH-D209	Aerotropolis	VWP	290782.3	6243298.6	Residual	Existing	64.83	-	Yes	-	-		Continuous	
SMGW-BH-D209	Aerotropolis	VWP	290782.3	6243298.6	Bedrock	Existing	64.83	-	Yes	-	-		Continuous	
SMGW-BH-D209	Aerotropolis	VWP	290782.3	6243298.6	Bedrock	Existing	64.83	-	Yes	-	-		Continuous	
SBT-VWP-1001-A	St Marys Station	VWP	294446	6261843	Bedrock	Proposed	48.96	-	No	Yes - levels	-		Continuous	
SBT-VWP-1001-B	St Marys Station	VWP	294446	6261843	Bedrock	Proposed	48.96	-	No	Yes - levels	-		Continuous	
SBT-VWP-1005-A	St Marys Station	VWP	294259	6261830	Bedrock	Proposed	44.1	-	No	Yes - levels	-		Continuous	
SBT-VWP-1005-B	St Marys Station	VWP	294259	6261830	Bedrock	Proposed	44.1	-	No	Yes - levels	-		Continuous	
SBT-VWP-1028-A	Claremont Meadows Services Facility	VWP	292050	6261168	Bedrock	Proposed	30.96	-	No	Yes - levels	-		Continuous	
SBT-VWP-1028-B	Claremont Meadows Services Facility	VWP	292050	6261168	Bedrock	Proposed	30.96	-	No	Yes - levels	-		Continuous	
SBT-VWP-1037-A	Orchard Hills Station	VWP	291731	6259318	Bedrock	Proposed	39.94	-	No	Yes - levels	-		Continuous	
SBT-VWP-1037-B	Orchard Hills Station	VWP	291731	6259318	Bedrock	Proposed	39.94	-	No	Yes - levels	-		Continuous	
SBT-VWP-1043-A	Orchard Hills Station	VWP	291842	6259102	Bedrock	Proposed	40.88	-	No	Yes - levels	-		Continuous	
SBT-VWP-1043-B	Orchard Hills Station	VWP	291842	6259102	Bedrock	Proposed	40.88	-	No	Yes - levels	-		Continuous	
SBT-VWP-1400	St Marys Station	VWP	294364	6261902	Bedrock	Proposed	37.61	-	No	Yes - levels	-		Continuous	
SBT-VWP-1401	St Marys Station	VWP	293998	6261941	Bedrock	Proposed	36.04	-	No	Yes - levels	-		Continuous	
SBT-VWP-1402	Claremont Meadows Services Facility	VWP	292053	6261285	Bedrock	Proposed	27.7	-	No	Yes - levels	-		Continuous	
SBT-VWP-1403	Claremont Meadows Services Facility	VWP	292014	6261270	Bedrock	Proposed	27.77	-	No	Yes - levels	-		Continuous	
SBT-VWP-1404	Orchard Hills Station	VWP	291857	6259281	Bedrock	Proposed	38.46	-	No	Yes - levels	-		Continuous	
SBT-VWP-1405	Orchard Hills Station	VWP	291819	6259172	Bedrock	Proposed	39.28	-	No	Yes - levels	-		Continuous	
SBT-VWP-1406	Orchard Hills Station	VWP	291869	6259169	Bedrock	Proposed	37.88	-	No	Yes - levels	-		Continuous	
SBT-VWP-1407	Orchard Hills Station	VWP	291881	6259083	Bedrock	Proposed	39.62	-	No	Yes - levels	-		Continuous	
SBT-VWP-1408	Orchard Hills Station	VWP	291821	6258955	Bedrock	Proposed	40.6	-	No	Yes - levels	-		Continuous	
SBT-VWP-3400	Airport Portal	VWP	290259	6248356	Bedrock	Proposed	69.22	-	No	Yes - levels	-		Continuous	
SBT-VWP-3401	Airport Portal	VWP	290285	6248321	Bedrock	Proposed	67.98	-	No	Yes - levels	-		Continuous	
SBT-VWP-3402	Airport Terminal Station	VWP	289302	6247833	Bedrock	Proposed	73.84	-	No	Yes - levels	-		Continuous	
SBT-VWP-3403	Airport Terminal Station	VWP	289305	6247793	Bedrock	Proposed	74.16	-	No	Yes - levels	-		Continuous	
SBT-VWP-3404	Airport Terminal Station	VWP	289027	6247640	Bedrock	Proposed	81.71	-	No	Yes - levels	-		Continuous	
SBT-VWP-3405	Airport Terminal Station	VWP	289004	6247620	Bedrock	Proposed	81.4	-	No	Yes - levels	-		Continuous	
SBT-VWP-4000	Western Sydney Airport	VWP	288957	6246640	Bedrock	Proposed	79	-	No	Yes - levels	-		Continuous	Monitoring levels during TBM and XPS11 construction
SBT-VWP-4014-A	Aerotropolis Station	VWP	290504	6243986	Bedrock	Proposed	76.93	-	No	Yes - levels	-		Continuous	
SBT-VWP-4014-B	Aerotropolis Station	VWP	290504	6243986	Bedrock	Proposed	76.93	-	No	Yes - levels	-		Continuous	
SBT-VWP-4400	Bringelly Service Facility	VWP	289583.77	6245819.85	Bedrock	Proposed	72.13	-	No	Yes - levels	-		Continuous	
SBT-VWP-4401	Bringelly Service Facility	VWP	289599.98	6245799.8	Bedrock	Proposed	72.87	-	No	Yes - levels	-		Continuous	
SBT-VWP-4402	Bringelly Service Facility	VWP	289678.48	6245750.42	Bedrock	Proposed	73.53	-	No	Yes - levels	-		Continuous	
SBT-VWP-4403	Aerotropolis Station	VWP	290672.48	6244246.42	Bedrock	Proposed	73.53	-	No	Yes - levels	-		Continuous	
SBT-VWP-4404	Aerotropolis Station	VWP	290680.48	6244194.42	Bedrock	Proposed	72.01	-	No	Yes - levels	-		Continuous	
SBT-VWP-4405	Aerotropolis Station	VWP	290668.48	6244001.42	Bedrock	Proposed	71.54	-	No	Yes - levels	-		Continuous	
SBT-VWP-4406	Aerotropolis Station	VWP	290718.48	6243931.42	Bedrock	Proposed	73.39	-	No	Yes - levels	-		Continuous	



CPB CONTRACTORS

Ghella 1894 5 Generations of Tunnelers

LEGEND

- Existing VWP
- Proposed VWP

Existing Monitoring Bore
- Alluvium
- Alluvium/Bedrock
- Bedrock
- Residual
- Residual/Alluvium
- Residual/Bedrock
- Screened Lithology TBC

Proposed Monitoring Bore
- Alluvium/Bedrock
- Bedrock
- Residual
- Residual/Alluvium
- Residual/Bedrock
- Screened Lithology TBC

- Project Alignment
- Project Alignment Structure
- Railway
- Major Road
- Perennial Watercourse
- Non-perennial Watercourse
- Waterbody
- Project Alignment Buffer (1 km)

N

0 1 2 km

SCALE **1:80,000**
PAGE SIZE: **A3**
PROJECTION: **GDA2020 MGA Zone 56**

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE A-1

Groundwater Monitoring Locations - Existing and Proposed for Site Investigation Works

Groundwater Monitoring Plan

TETRA TECH COFFEY

DATE: **14.04.22** PROJECT: **754-SYDGE292575** FILE: **292575_GMP_A_FA-1_GIS_REVD**

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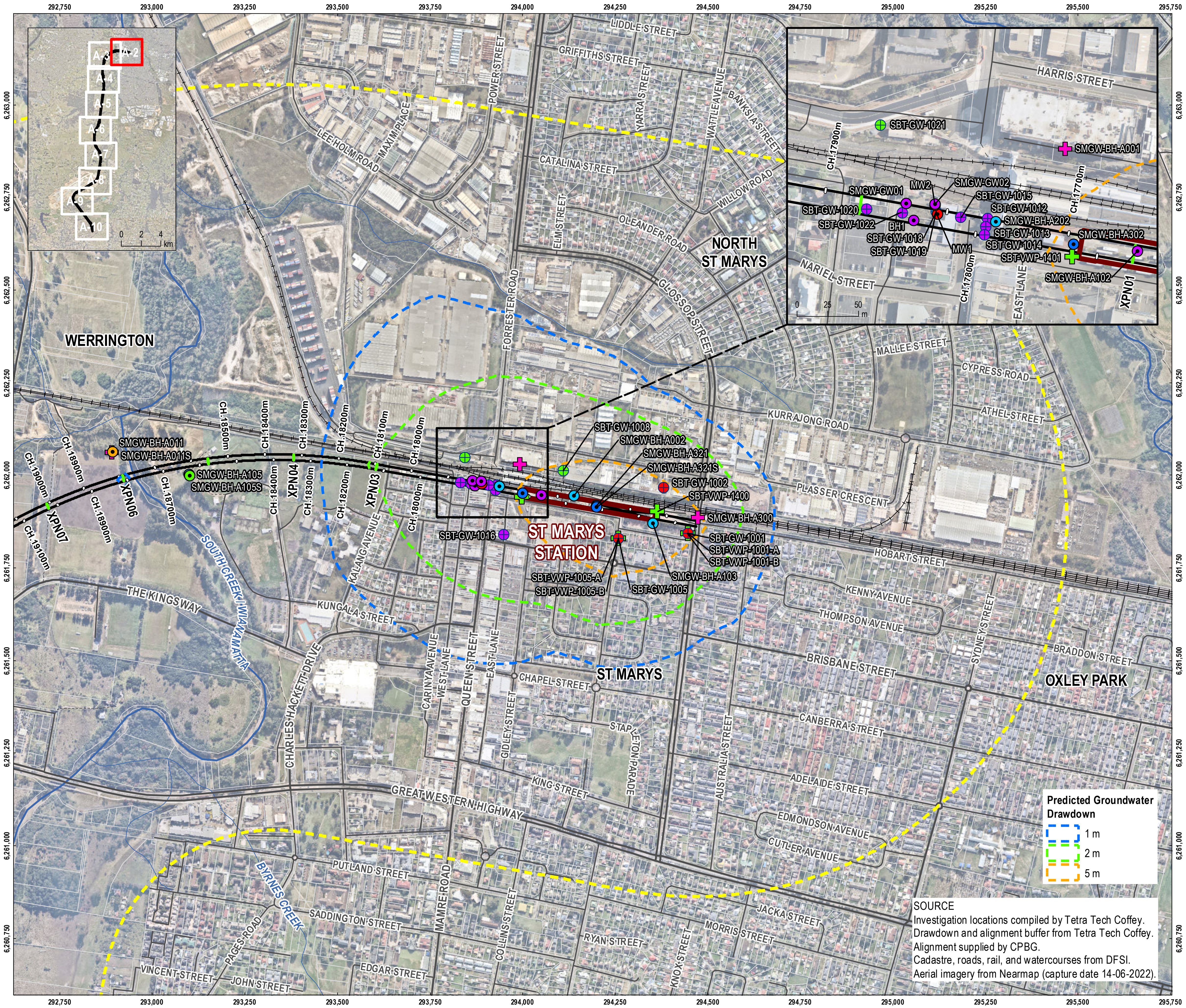

CPB CONTRACTORS
Ghella
5 Generations of Tunnelers

LEGEND

- Existing VWP
- Proposed VWP

Existing Monitoring Bore
- Alluvium
- Bedrock
- Residual
- Residual/Alluvium
- Residual/Bedrock
- Screened Lithology TBC

Proposed Monitoring Bore
- Bedrock
- Residual
- Residual/Alluvium
- Screened Lithology TBC

- Project Alignment
- Project Alignment Chainage
- Project Alignment Cross Passage
- Project Alignment Structure
- Railway
- Major Road
- Minor Road
- Track
- Path
- Perennial Watercourse
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)

0 200 400 m
SCALE 1:10,000
PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE A-2

Groundwater Monitoring Locations - Existing and Proposed for Site Investigation Works

Groundwater Monitoring Plan

TETRA TECH COFFEY

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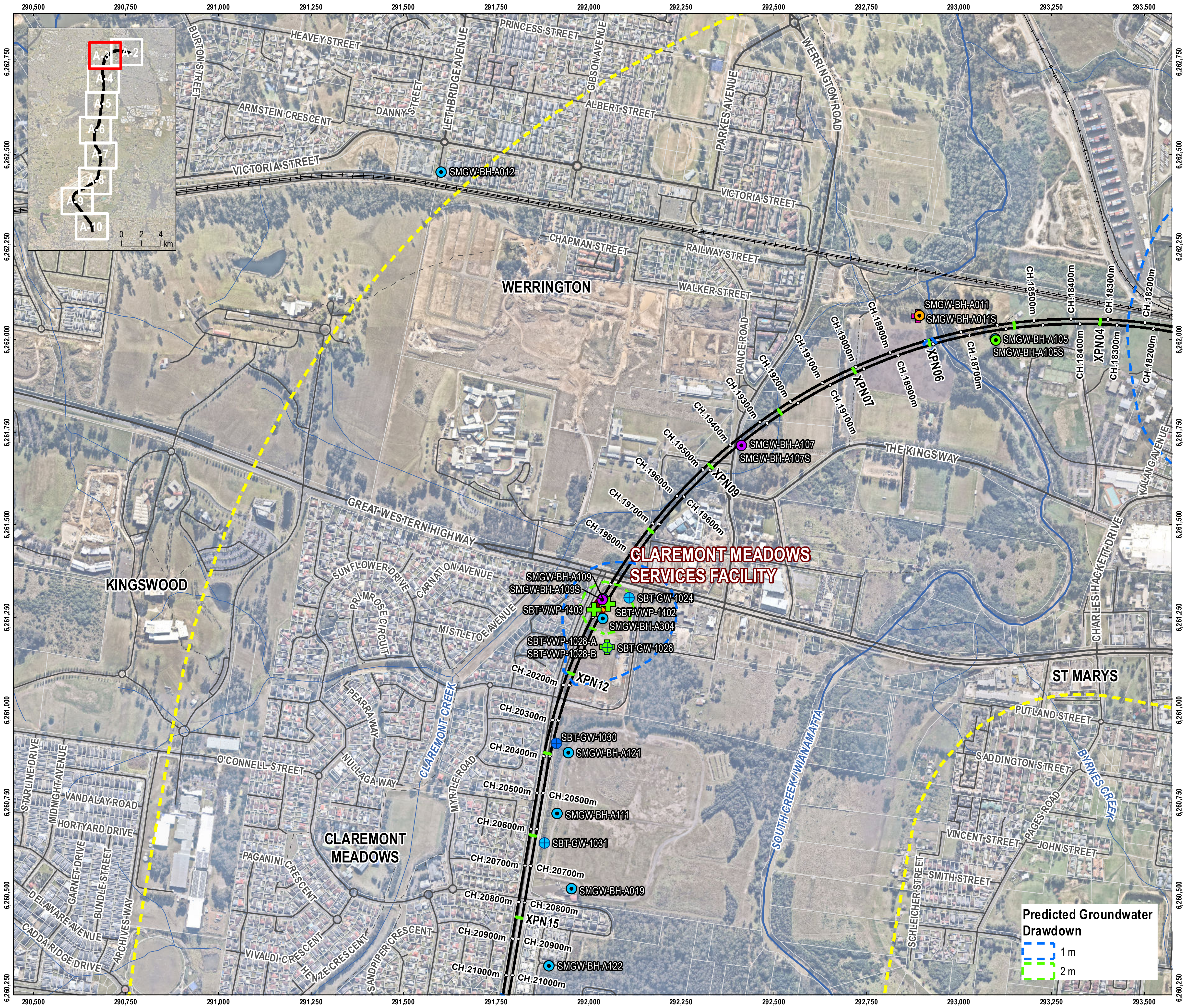

CPB CONTRACTORS

Ghella 1894 5 Generations of Tunnelers

LEGEND

- Existing VWP
- Proposed VWP

Existing Monitoring Bore
- Alluvium
- Bedrock
- Residual
- Residual/Alluvium

Proposed Monitoring Bore
- Bedrock
- Residual/Alluvium
- Residual/Bedrock
- Project Alignment
- Project Alignment Chainage
- Project Alignment Cross Passage
- Project Alignment Structure
- Railway
- Major Road
- Minor Road
- Track
- Path
- Perennial Watercourse
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)

SOURCE
Investigation locations compiled by Tetra Tech Coffey.
Alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastre, roads, rail, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).

0 200 400 m
SCALE 1:10,000
PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE A-3

Groundwater Monitoring Locations - Existing and Proposed for Site Investigation Works

Groundwater Monitoring Plan

TETRA TECH COFFEY

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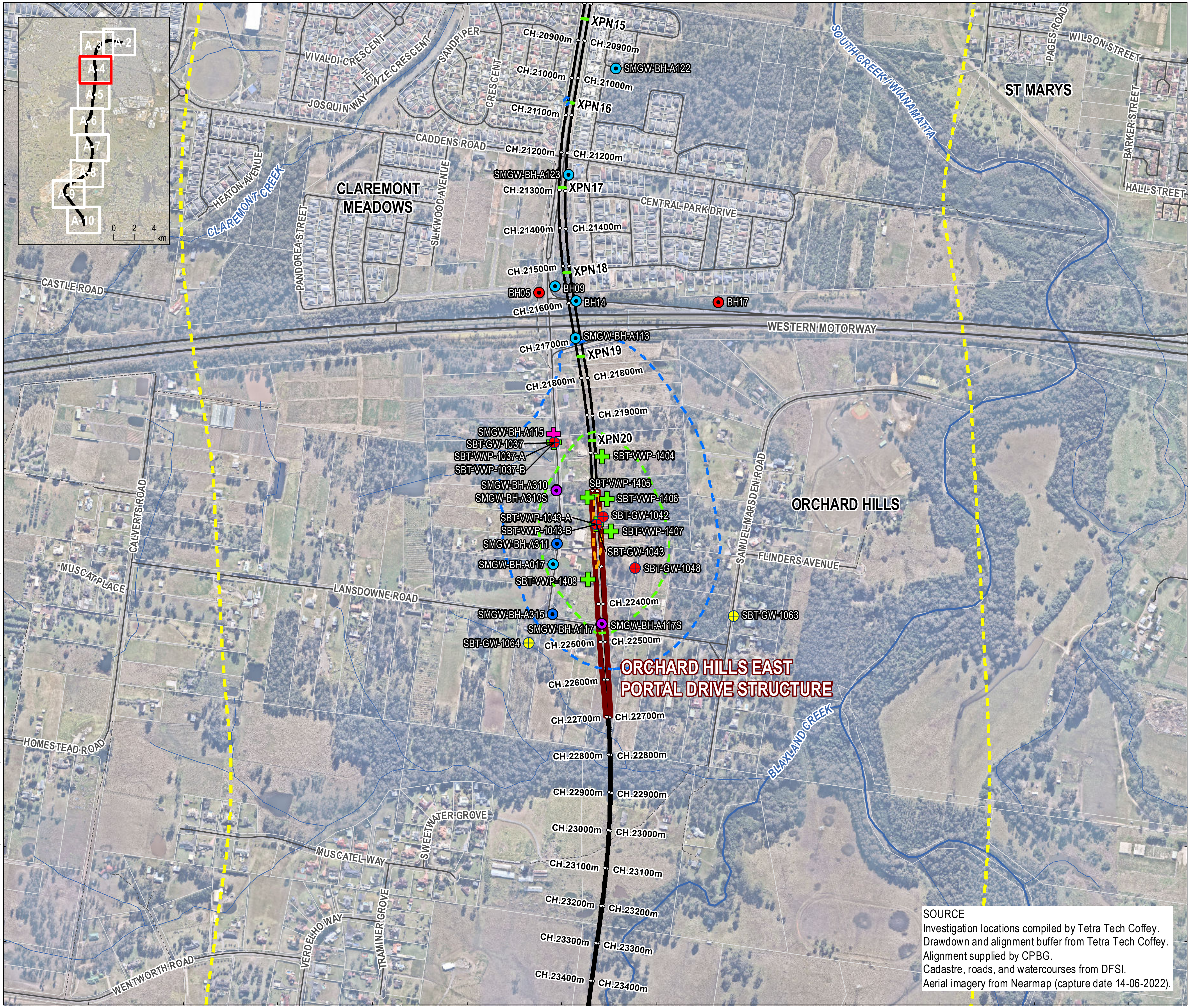

SOURCE
Investigation locations compiled by Tetra Tech Coffey.
Drawdown and alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastre, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).

CPB CONTRACTORS | Ghella 1894 5 Generations of Tunnelers

LEGEND

- Existing VWP
- Proposed VWP

Existing Monitoring Bore
- Bedrock
- Residual
- Residual/Bedrock
- Screened Lithology TBC

Proposed Monitoring Bore
- Alluvium/Bedrock
- Screened Lithology TBC

- Project Alignment
- Project Alignment Chainage
- Project Alignment Cross Passage
- Project Alignment Structure
- Major Road
- Minor Road
- Track
- Path
- Perennial Watercourse
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)

Predicted Groundwater Drawdown
- 1 m
- 2 m
- 5 m

0 200 400 m

SCALE 1:10,000
PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE A-4

Groundwater Monitoring Locations - Existing and Proposed for Site Investigation Works

Groundwater Monitoring Plan

TETRA TECH COFFEY

DATE: 08.09.22 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_A_FA-4_GIS_REVD

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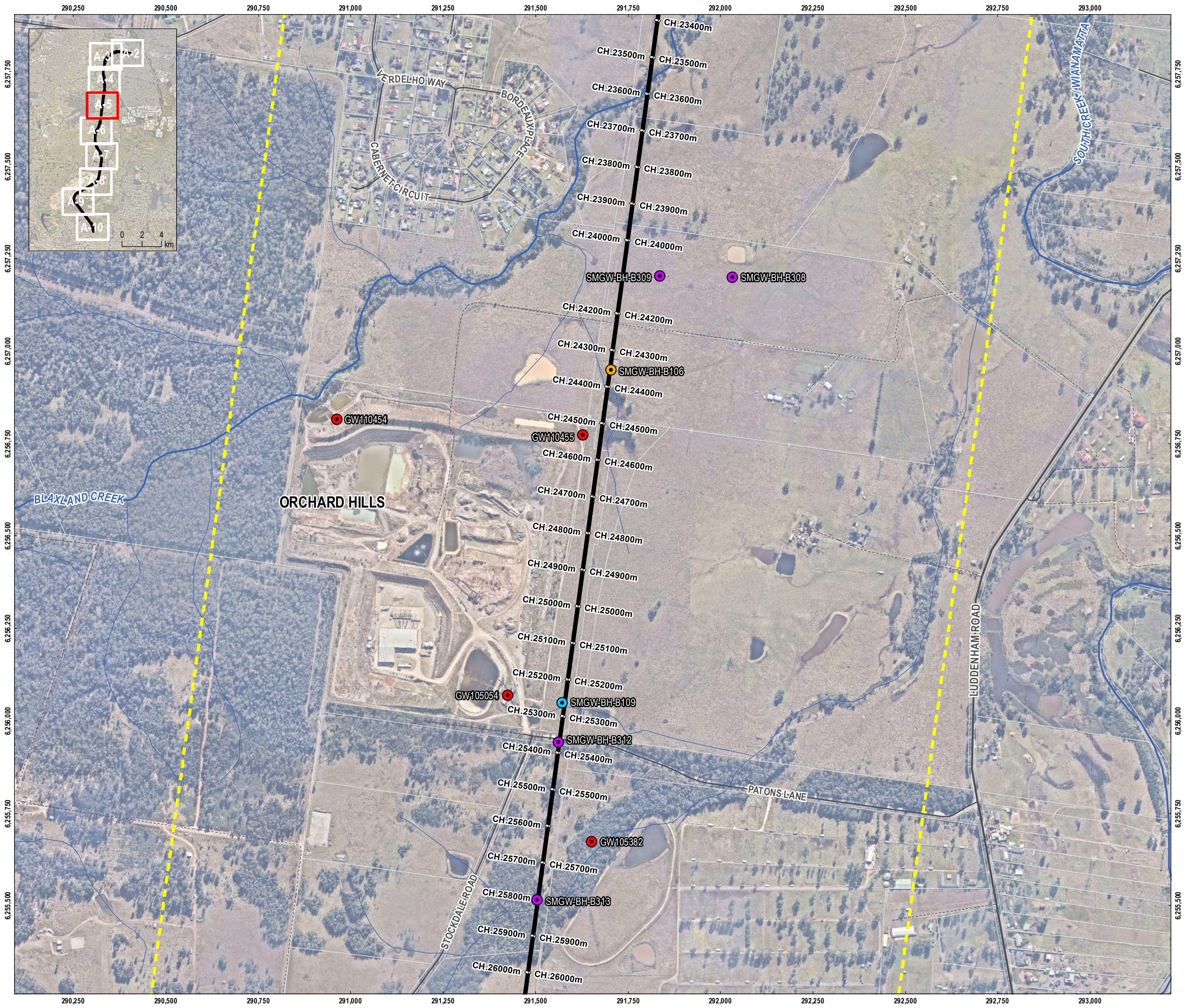

CPB CONTRACTORS

Ghella 1894 5 Generations of Tunnelers

LEGEND

Existing Monitoring Bore

- Alluvium
- Bedrock
- Residual
- Screened Lithology TBC
- Project Alignment
- Project Alignment Chainage
- Major Road
- Minor Road
- Track
- Perennial Watercourse
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)

SOURCE
Investigation locations compiled by Tetra Tech Coffey.
Alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastre, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).

N

0 200 400 m

SCALE 1:10,000
PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE A-5

Groundwater Monitoring Locations - Existing and Proposed for Site Investigation Works

Groundwater Monitoring Plan

TETRA TECH COFFEY

DATE: 08.09.22 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_A_FA-5_GIS_REVD

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CPB CONTRACTORS

Ghella
1894 5 Generations of Tunnelers

LEGEND

- Existing VWP
- Existing Monitoring Bore
  - Bedrock
  - Residual
  - Residual/Bedrock
- Project Alignment
- Project Alignment Chainage
- Major Road
- Minor Road
- Track
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)

SOURCE
Investigation locations compiled by Tetra Tech Coffey.
Alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastre, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).

N

0 200 400 m

SCALE 1:10,000
PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE A-6

Groundwater Monitoring Locations - Existing and Proposed for Site Investigation Works

Groundwater Monitoring Plan

TETRA TECH COFFEY

DATE: 08.09.22 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_A_FA-6_GIS_REVD

CPB CONTRACTORS

Ghella 1894 5 Generations of Tunnelers

LEGEND

Existing Monitoring Bore

- Residual
- Screened Lithology TBC
- Project Alignment
- Project Alignment Chainage
- Major Road
- Minor Road
- Track
- Perennial Watercourse
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)

SOURCE
Investigation locations compiled by Tetra Tech Coffey.
Alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastre, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).

N

0 200 400 m

SCALE 1:10,000
PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE A-7

Groundwater Monitoring Locations - Existing and Proposed for Site Investigation Works

Groundwater Monitoring Plan

TETRA TECH COFFEY

DATE: 08.09.22 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_A_FA-7_GIS_REVD

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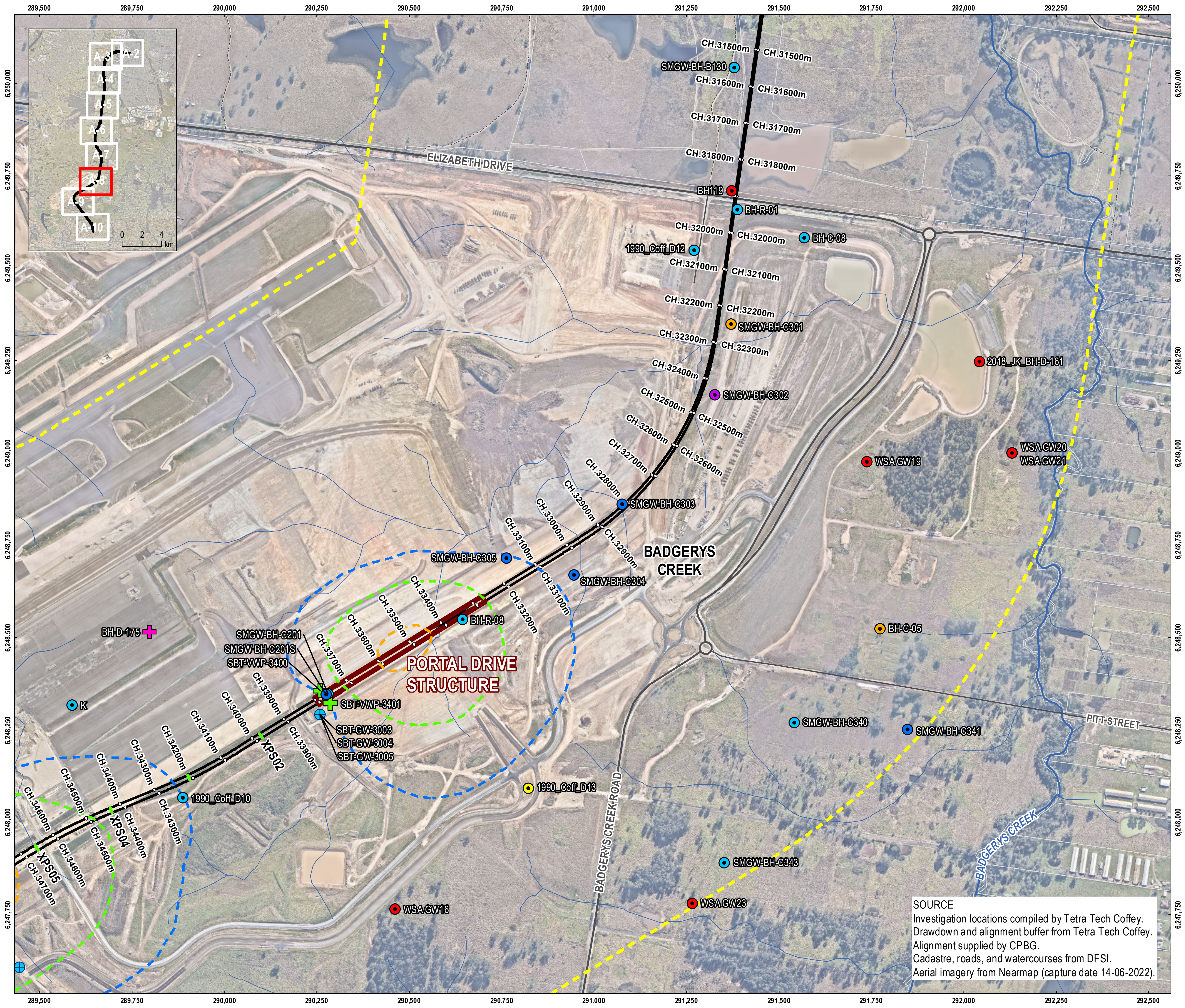

SOURCE
Investigation locations compiled by Tetra Tech Coffey.
Drawdown and alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Cadastre, roads, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 14-06-2022).

CPB CONTRACTORS | Ghella 1894 5 Generations of Tunnelers

LEGEND

- Existing VWP
- Proposed VWP

Existing Monitoring Bore
- Alluvium
- Alluvium/Bedrock
- Bedrock
- Residual
- Residual/Bedrock
- Screened Lithology TBC

Proposed Monitoring Bore
- Bedrock
- Screened Lithology TBC
- Project Alignment
- Project Alignment Chainage
- Project Alignment Cross Passage
- Project Alignment Structure
- Major Road
- Minor Road
- Track
- Perennial Watercourse
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)

Predicted Groundwater Drawdown
- 1 m
- 2 m
- 5 m

0 200 400 m

SCALE 1:10,000
PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE A-8

Groundwater Monitoring Locations - Existing and Proposed for Site Investigation Works
Groundwater Monitoring Plan

TETRA TECH COFFEY

DATE: 08.09.22 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_A_FA-8_GIS_REVD

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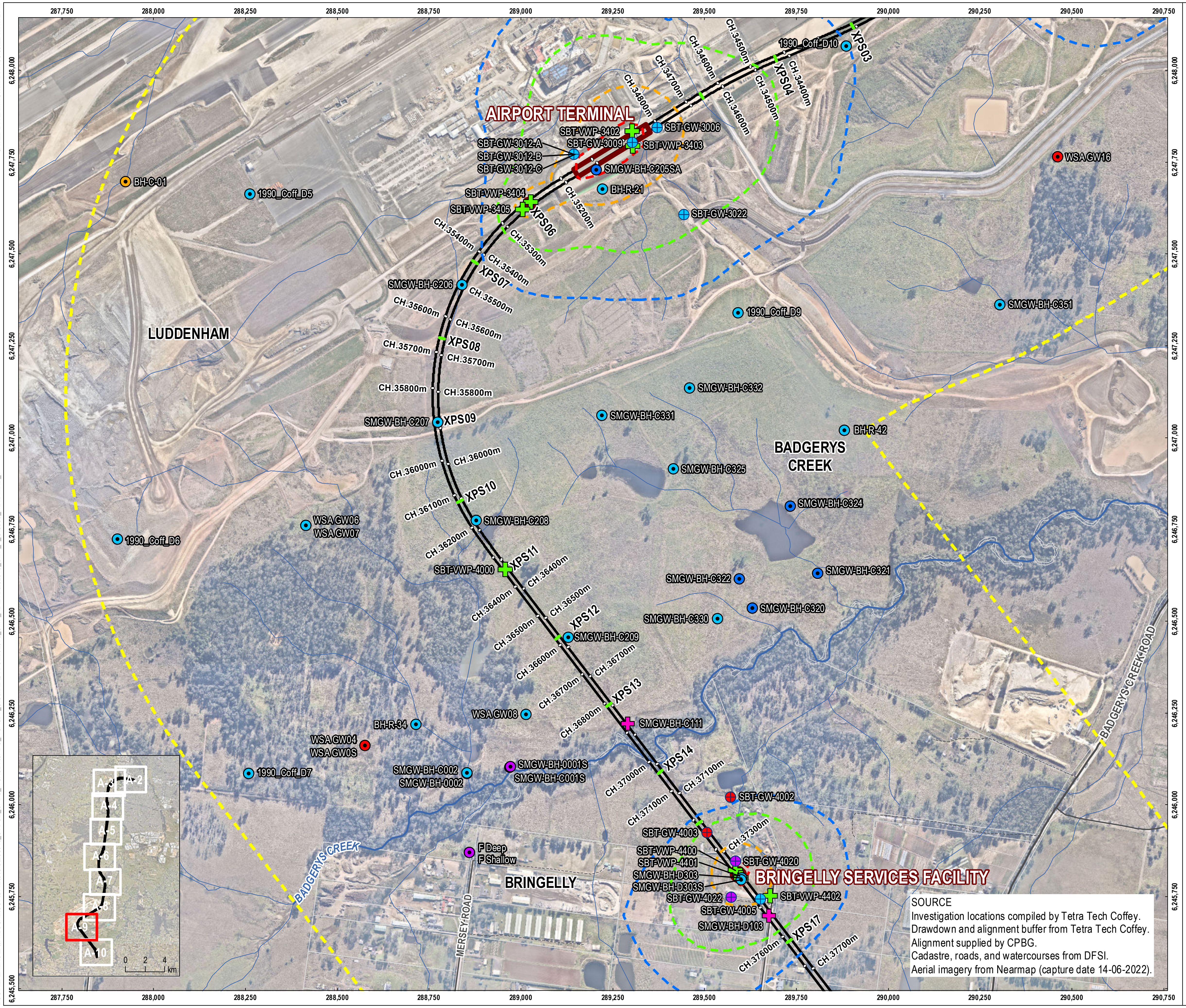
DOC REFERENCE: \\TT.LOCAL\COFS\772\SIS\286919_SYDGE_CPBG_WSASBT\CPBG_WSASBT_GIS\MXD\SYDGE292575_GMP_A\REVD\292575_GMP_A_GIS008_REVD.MXD_1



CPB CONTRACTORS

Ghella 1894 5 Generations of Tunnelers

LEGEND

- Existing VWP
- Proposed VWP

Existing Monitoring Bore

- Alluvium
- Bedrock
- Residual
- Residual/Bedrock
- Screened Lithology TBC

Proposed Monitoring Bore

- Bedrock
- Residual
- Screened Lithology TBC
- Project Alignment
- Project Alignment Chainage
- Project Alignment Cross Passage
- Project Alignment Structure
- Major Road
- Minor Road
- Track
- Perennial Watercourse
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)

Predicted Groundwater Drawdown

- 1 m
- 2 m
- 5 m
- 10 m

N

0 200 400 m

SCALE 1:10,000

PAGE SIZE: A3

PROJECTION: GDA2020 MGA Zone 56

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WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

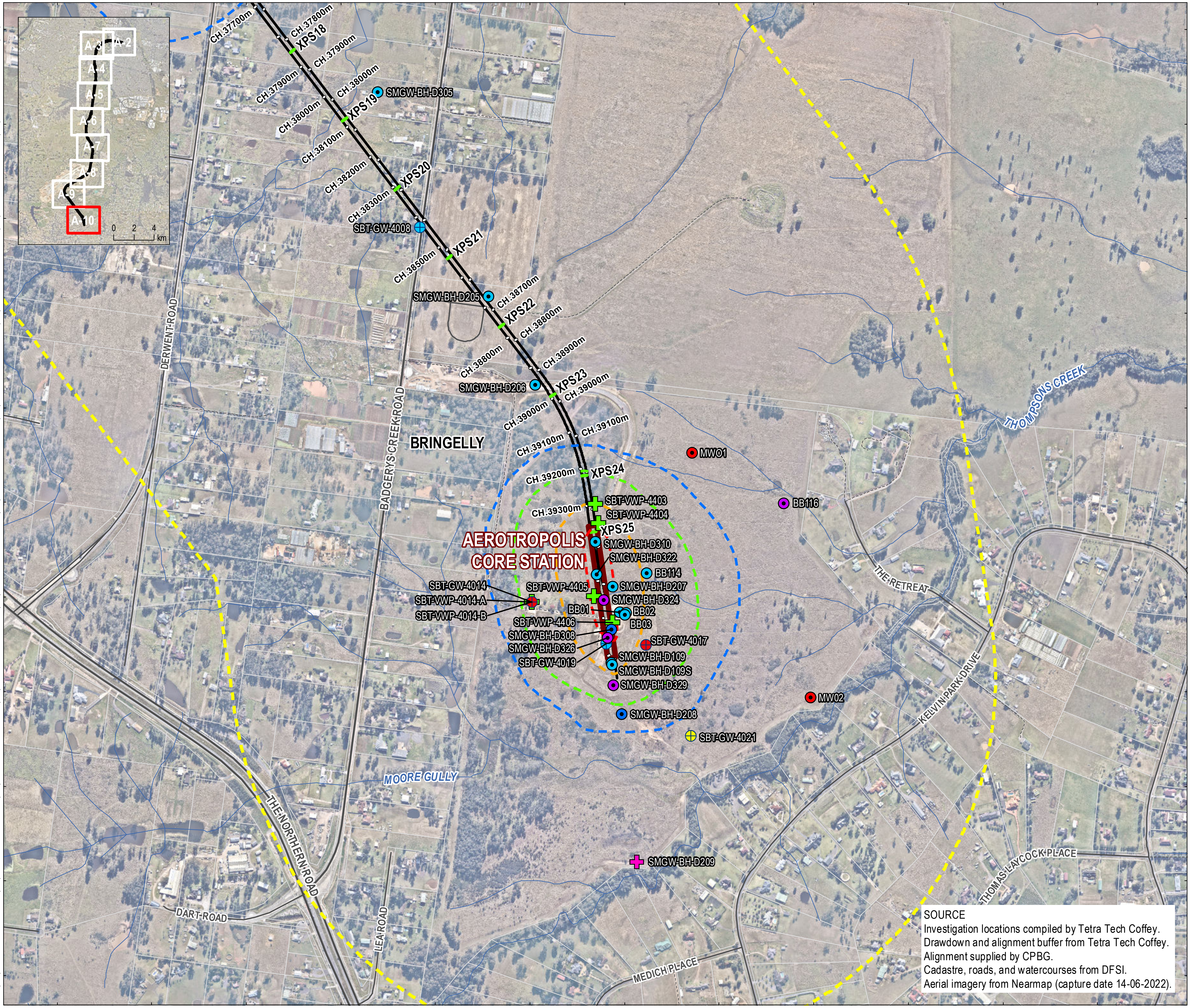
FIGURE A-9

Groundwater Monitoring Locations - Existing and Proposed for Site Investigation Works

Groundwater Monitoring Plan

TETRA TECH COFFEY

DATE: 08.09.22 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_A_FA-9_GIS_REVD



CPB CONTRACTORS | Ghella 1894 5 Generations of Tunnelers

LEGEND

- Existing VWP
- Proposed VWP

Existing Monitoring Bore
- Bedrock
- Residual
- Residual/Bedrock
- Screened Lithology TBC

Proposed Monitoring Bore
- Alluvium/Bedrock
- Bedrock
- Screened Lithology TBC
- Project Alignment
- Project Alignment Chainage
- Project Alignment Cross Passage
- Project Alignment Structure
- Major Road
- Minor Road
- Track
- Non-perennial Watercourse
- Cadastral Boundary
- Project Alignment Buffer (1 km)

Predicted Groundwater Drawdown
- 1 m
- 2 m
- 5 m
- 10 m

0 200 400 m

SCALE 1:10,000
PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE A-10

Groundwater Monitoring Locations - Existing and Proposed for Site Investigation Works

Groundwater Monitoring Plan

TETRA TECH COFFEY

DATE: 08.09.22 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_A_FA-10_GIS_REVD

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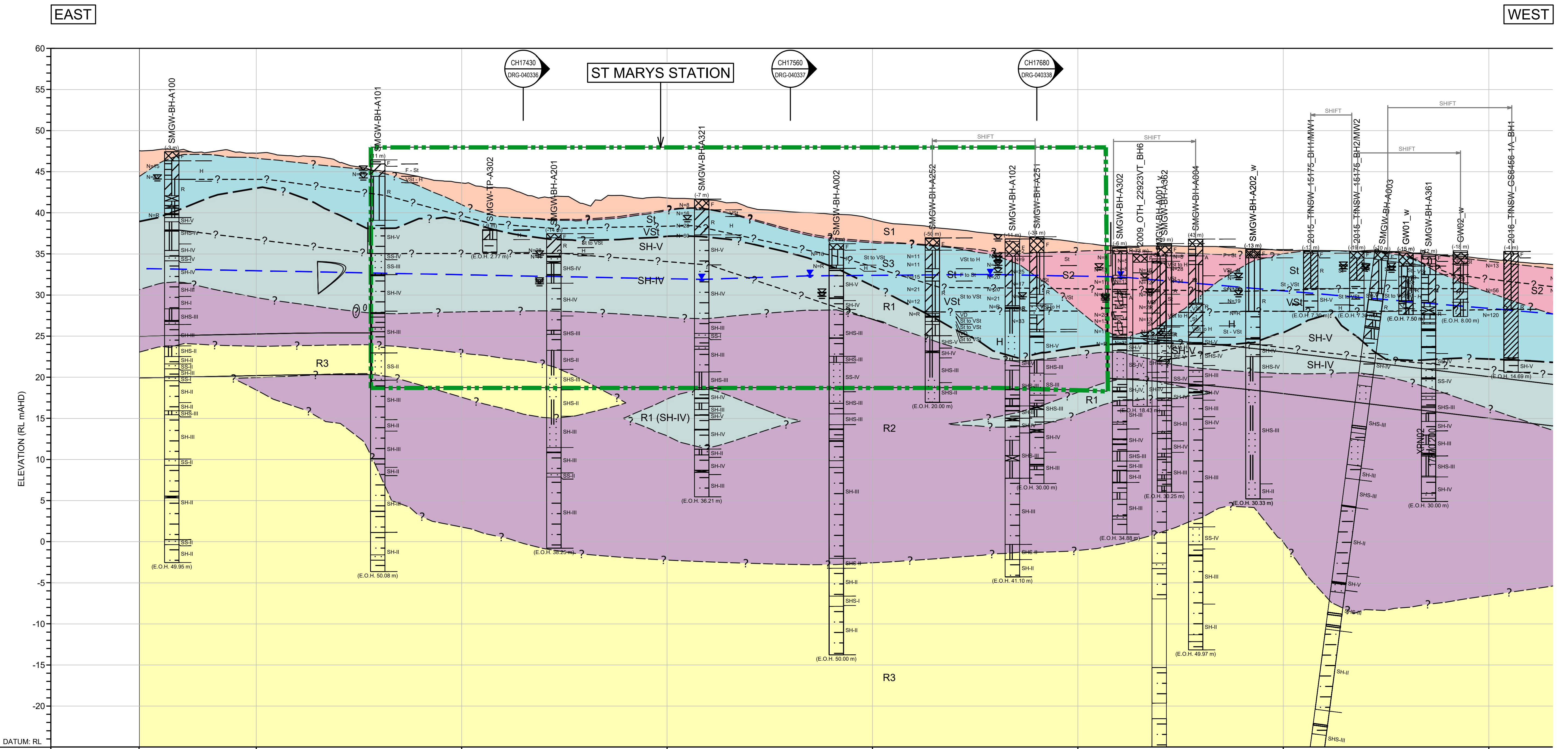
Annexure B Geological Long Sections



CHAINAGE (m)	17243	17300	17400	17500	17600	17700	17800	17900
TUNNEL AXIS LEVEL		22.801	22.815	22.815	22.815	22.216	19.744	16.744
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL		20% SH-III; 80% SH-II	NOT APPLICABLE			50% SH-IV; 50% SH-III	
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE		80% SH-IV; 20% SH-III	NOT APPLICABLE			90% S3; 10% SH-V	
ESTIMATED GSI	R1: 40; R2: 46; R3: 62	R1: 37; R2: 53; R3: 68	R1: 31; R2: 54; R3: N/A	R1: 38; R2: 51; R3: N/A	R1: 32; R2: 40; R3: N/A	R1: 38; R2: 41; R3: N/A	
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 4°/151°; J1: N/A; J2: 60°/132°; J3: 52°/258°; J4: 55°/108°	B: 2°/233°; J1: 55°/359°; J2: 64°/190°; J3: 61°/266°; J4: 53°/084°	B: 4°/238°; J1: 57°/345°; J2: 64°/157°; J3: 57°/080°; J4: 71°/071°	B: 2°/288°; J1: TO J3: N/A; J4: 68°/056°	B: 5°/307°; J1: TO J4: N/A	B: 5°/307°; J1: 77°/318°; J2: TO J4: N/A	
GROUTING EXPECTATIONS							

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

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SCALES
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SCALE 1:500 AT A3 SIZE (0 2.5 5.0 7.5 10 12.5 15m)

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GEODATA, BG&E, TETRA TECH COFFEY, PSM, Robert Bird Group, ARCADIS

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DRG CHECK	Troy Credlin	25 Feb 2022
DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

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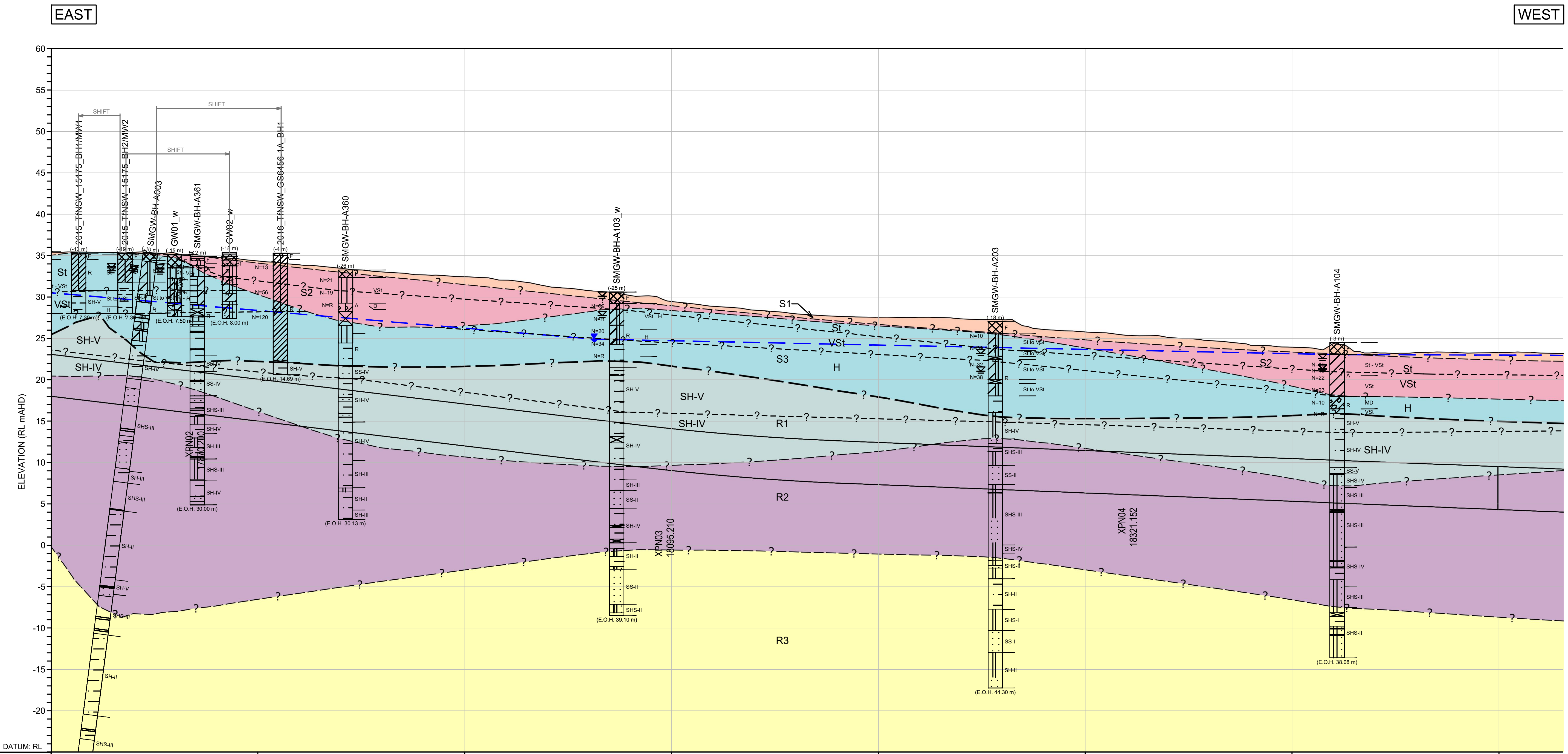

CHAINAGE (m)	17800	17900	18000	18100	18200	18300	18400	18500
TUNNEL AXIS LEVEL	19.744	16.744	13.744	11.041	9.823	8.809	7.794	6.779
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	50% SH-IV; 50% SH-III	100% SH-IV	10% SH-IV; 90% SH-III	40% SH-IV; 60% SH-III
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	90% S3; 10% SH-V	60% S3; 40% SH-V	70% S3; 30% SH-IV	50% S3; 20% SH-V; 30% SH-IV
ESTIMATED GSI	R1: 38; R2: 41; R3: N/A			
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 5°/307°; J1: 77°/318°; J2: TO J4: N/A			
GROUTING EXPECTATIONS				

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

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SCALES
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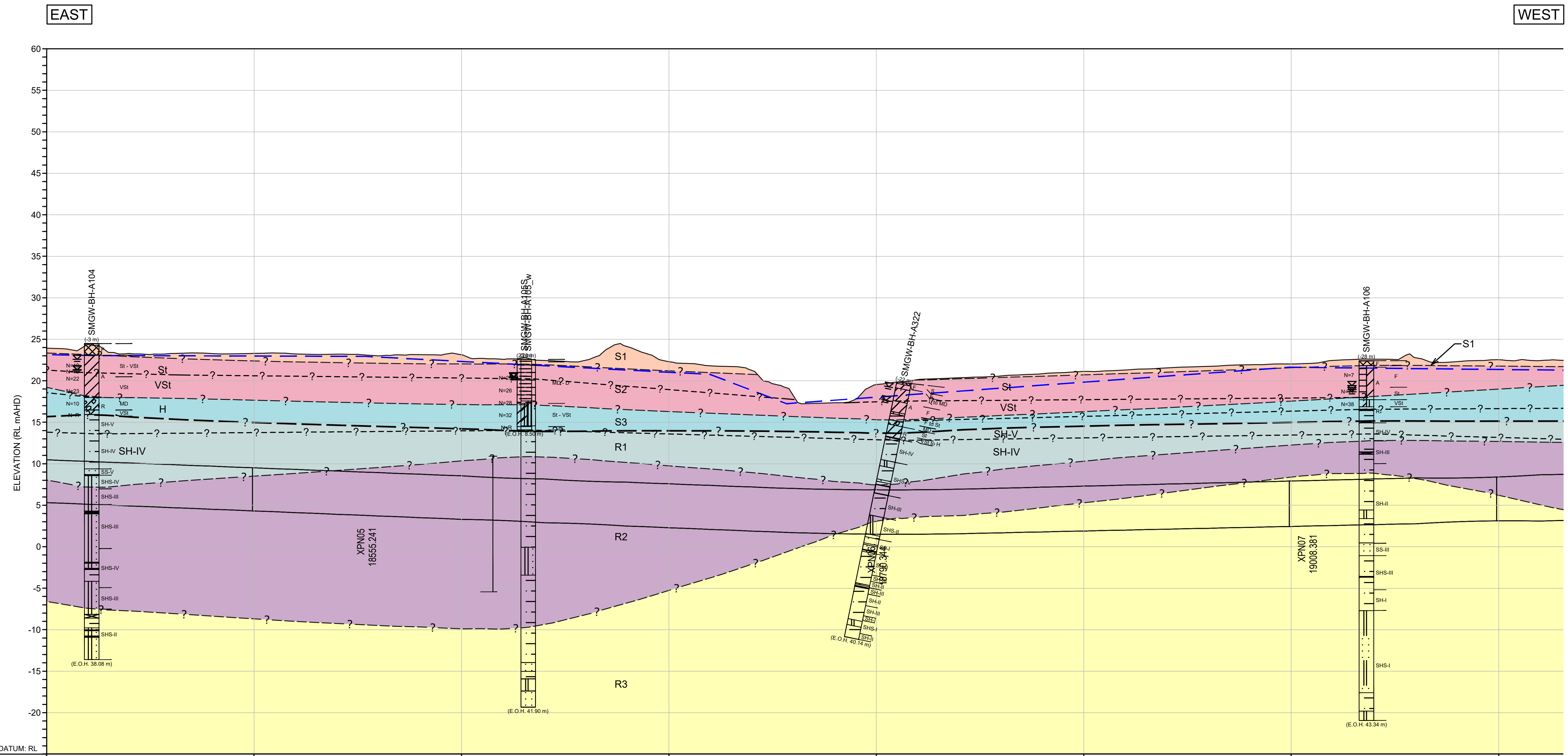

CHAINAGE (m)	18400	18500	18600	18700	18800	18900	19000	19100
TUNNEL AXIS LEVEL	7.794	6.779	5.765	4.750	4.157	4.676	5.255	5.833
APPROXIMATE EXISTING GROUND LEVEL								

	18400–18500	18500–18800	18800–19000	19000–19100
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	40% SH-IV; 60% SH-III	100% SH-III	50% SH-II; 50% SH-III	20% SH-III; 80% SH-II
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	50% S3; 20% SH-V; 30% SH-IV	20% S2; 30% S3; 30% SH-V; 20% SH-IV	25% S2; 25% S3; 25% SH-V; 25% SH-IV	40% S3; 20% SH-IV; 40% SH-III
ESTIMATED GSI				
DIP/DIP DIRECTION OF BEDDING, J1 TO J4				
GROUTING EXPECTATIONS				

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

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SCALES
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APPROVED	Troy Credlin	25 Feb 2022

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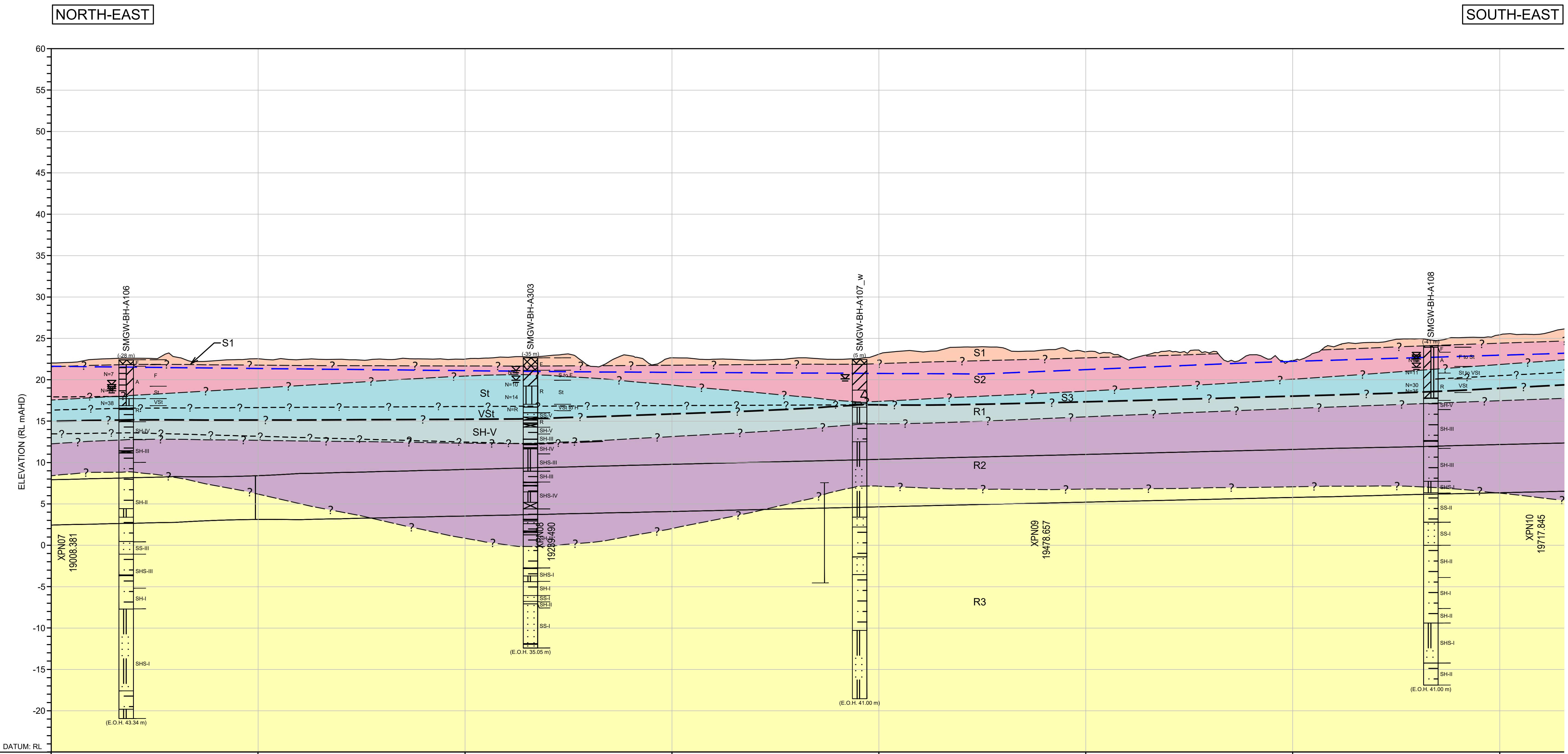

	19000	19100	19200	19300	19400	19500	19600	19700
CHAINAGE (m)	19000	19100	19200	19300	19400	19500	19600	19700
TUNNEL AXIS LEVEL	5.255	5.833	6.412	6.990	7.569	8.147	8.726	9.304
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	20% SH-III; 80% SH-II	100% SH-III
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	40% S3; 20% SH-IV; 40% SH-III	30% S3; 30% SH-V; 40% SH-III
ESTIMATED GSI		
DIP/DIP DIRECTION OF BEDDING, J1 TO J4		B: 2°/162°; J1: TO J4: N/A
GROUTING EXPECTATIONS		

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SCALES
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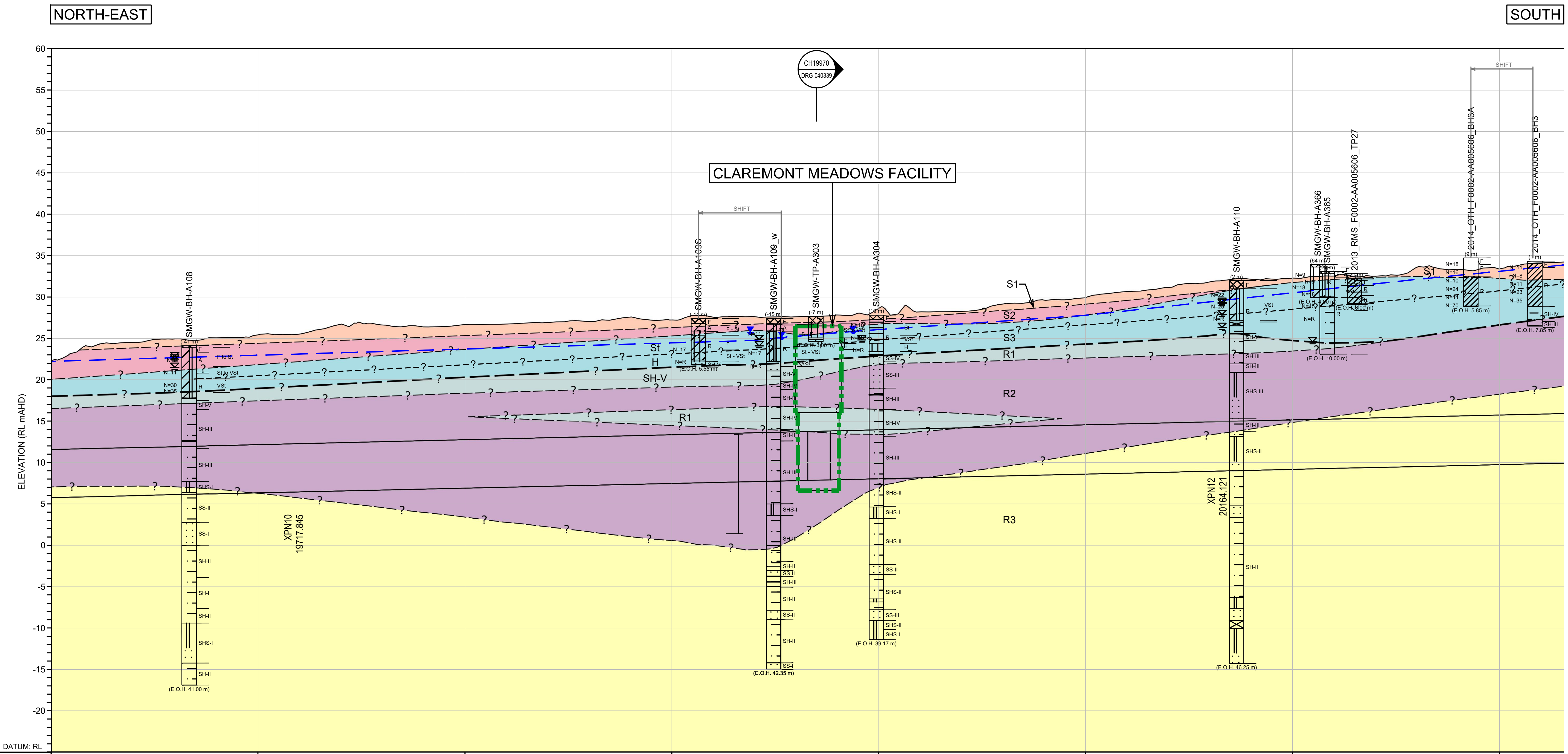

CHAINAGE (m)	19600	19700	19800	19900	20000	20100	20200	20300
TUNNEL AXIS LEVEL	8.726	9.304	9.883	10.461	11.040	11.618	12.197	12.775
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL		100% SH-III	100% SH-II	
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE		30% S3; 30% SH-V; 20% SH-IV; 20% SH-III	30% S3; 70% SH-III	
ESTIMATED GSI		R1: 34; R2: 52; R3: 66	R1: 42; R2: 50; R3: 61	
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 2°/162°; J1: TO J4: N/A	B: 4°/022°; J1: 74°/335°; J2: 78°/127°; J3: & J4: N/A	B: 5°/348°; J1: 70°/341°; J2: 69°/162°; J3: 61°/235°; J4: N/A	
GROUTING EXPECTATIONS				

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
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SCALES
SCALE 1:2000 AT A3 SIZE
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DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

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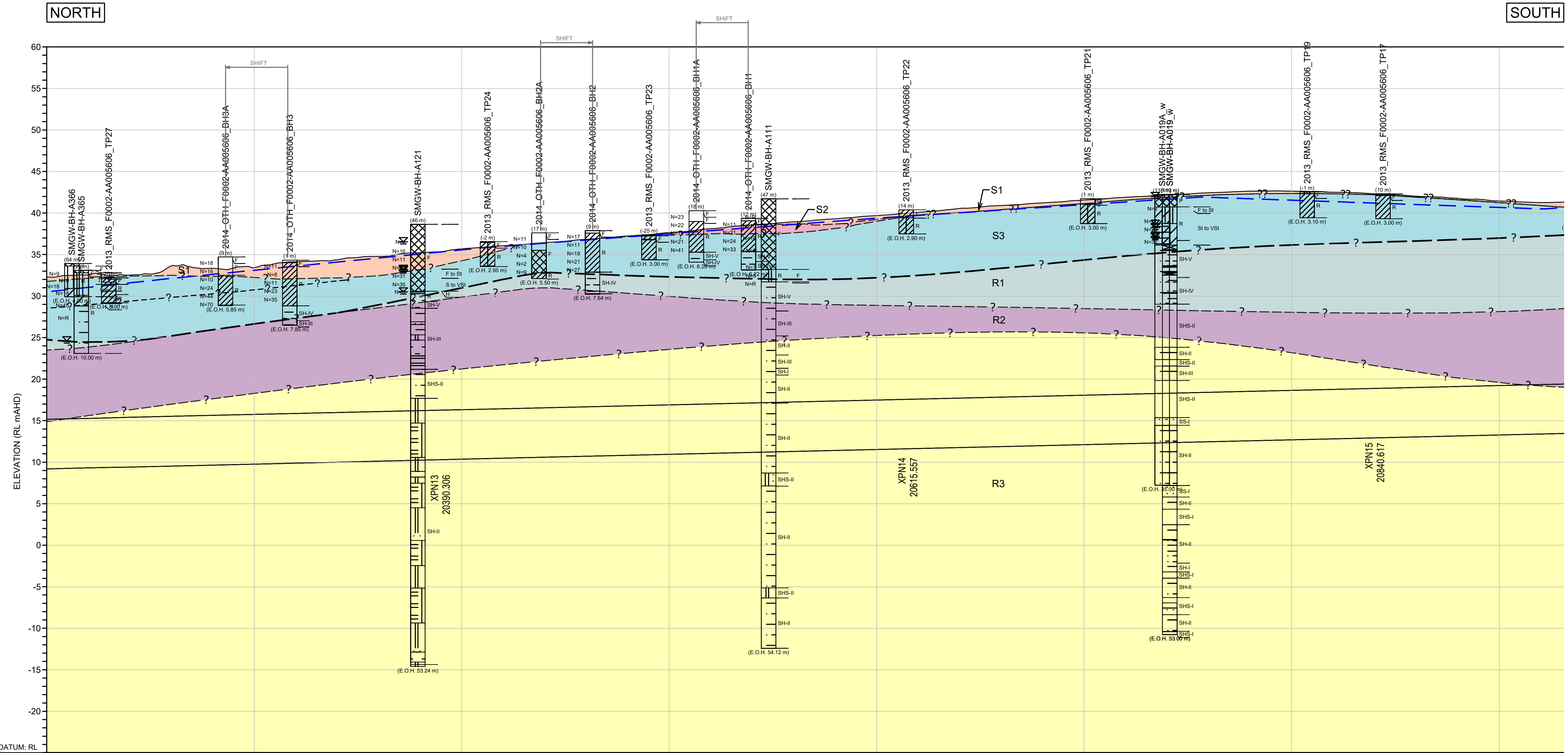
A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number



CHAINAGE (m)	20200	20300	20400	20500	20600	20700	20800	20900
TUNNEL AXIS LEVEL	12.197	12.775	13.354	13.932	14.511	15.089	15.668	16.246
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II	100% SH-II	100% SH-II	
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	0% S3; 70% SH-III	70% SH-III; 30% SH-II	30% SH-III; 70% SH-II	
ESTIMATED GSI				
DIP/DIP DIRECTION OF BEDDING, J1 TO J4				
GROUTING EXPECTATIONS				

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

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SCALES
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DRG CHECK	Troy Credlin	25 Feb 2022
DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

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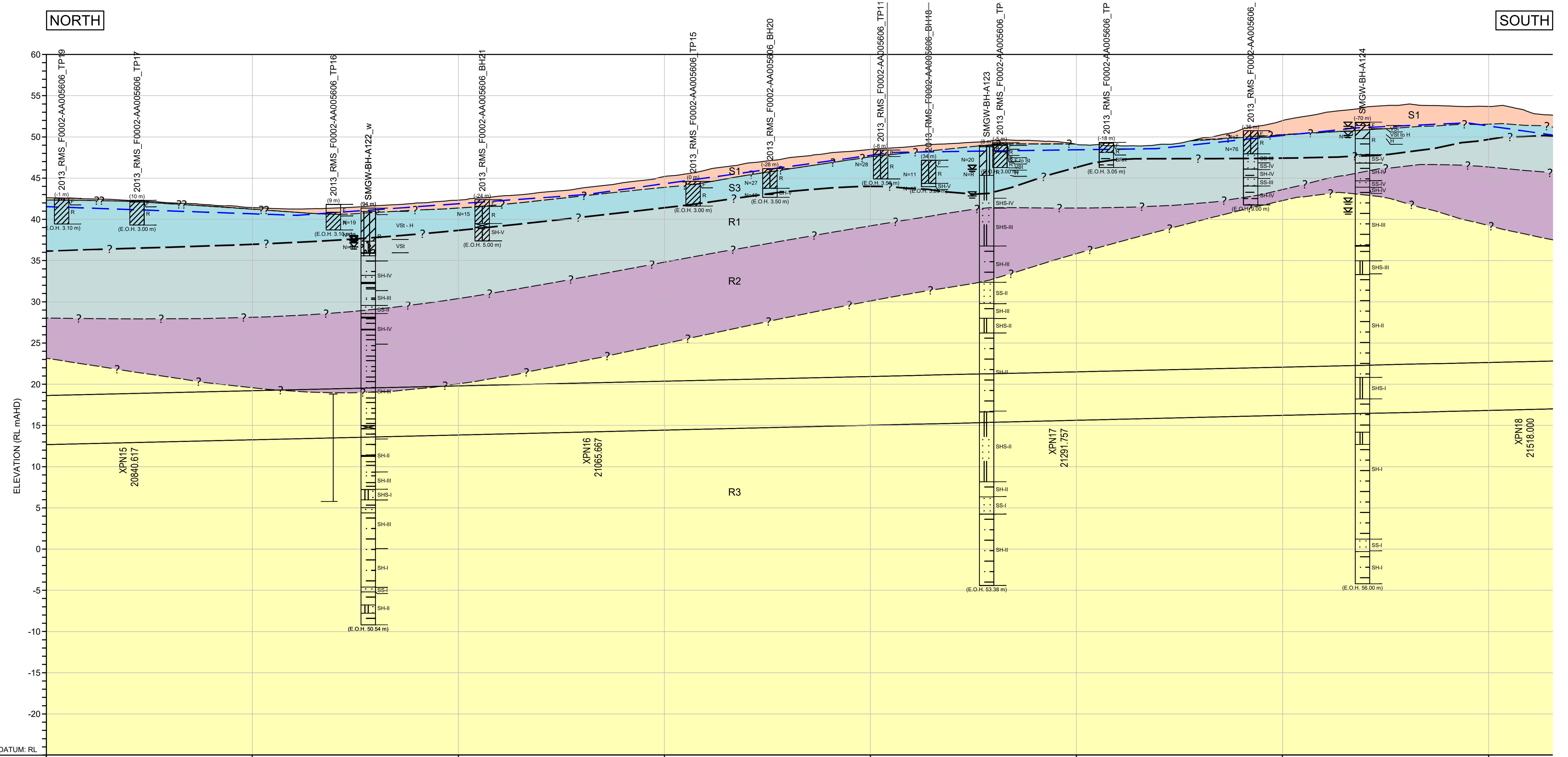

CHAINAGE (m)	20800	20900	21000	21100	21200	21300	21400	21500
TUNNEL AXIS LEVEL	15.668	16.246	16.825	17.403	17.982	18.560	19.139	19.717
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II	100% SH-II
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	10% SH-IV; 80% SH-III; 10% SH-II	100% SH-II
ESTIMATED GSI		
DIP/DIP DIRECTION OF BEDDING, J1 TO J4		
GROUTING EXPECTATIONS		

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN

SCALES
SCALE 1:2000 AT A3 SIZE
SCALE 1:500 AT A3 SIZE

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DRAWN	Annette Wilson	25 Feb 2022
DESIGNED	Viet Nguyen	25 Feb 2022
DRG CHECK	Troy Credlin	25 Feb 2022
DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

Sydney Metro Western Sydney Airport SBT
SBT North and SBT South
SBT North
GEOTECHNICAL LONG SECTION
CH17243 - CH22500 (SOUTHBOUND)

STATUS: FOR INFORMATION
SHEET 07 OF 09
DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040329
REV. A

A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number

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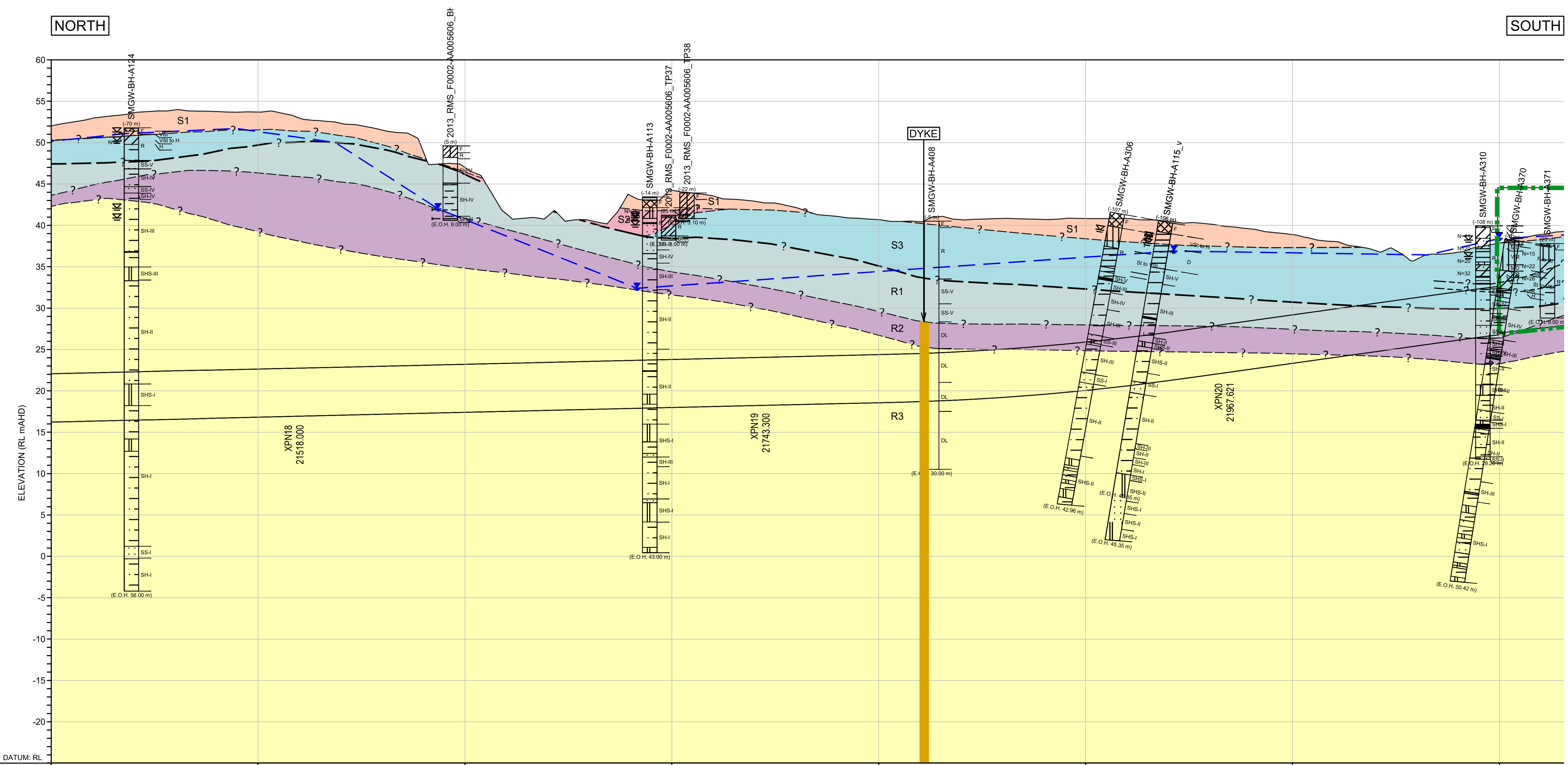
Plot Date: 28/03/22 - 12:06
100mm AT FULL SIZE



CHAINAGE (m)	21400	21500	21600	21700	21800	21900	22000	22100
TUNNEL AXIS LEVEL	19.139	19.717	20.296	20.874	21.453	22.894	26.144	29.610
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II	100% SH-II	100% SH-II	50% SH-III; 50% SH-II	30% S3; 50% SH-IV; 20% SH-III
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	100% SH-II	50% SH-III; 50% SH-II	30% S3; 40% SH-IV; 30% SH-III	30% S3; 50% SH-IV; 20% SH-III	100% S3
ESTIMATED GSI					
DIP/DIP DIRECTION OF BEDDING, J1 TO J4					
GROUTING EXPECTATIONS					

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN

SCALES
SCALE 1:2000 AT A3 SIZE
SCALE 1:500 AT A3 SIZE

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SERVICE PROVIDERS

DRAWN	Annette Wilson	25 Feb 2022
DESIGNED	Viet Nguyen	25 Feb 2022
DRG CHECK	Troy Credlin	25 Feb 2022
DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

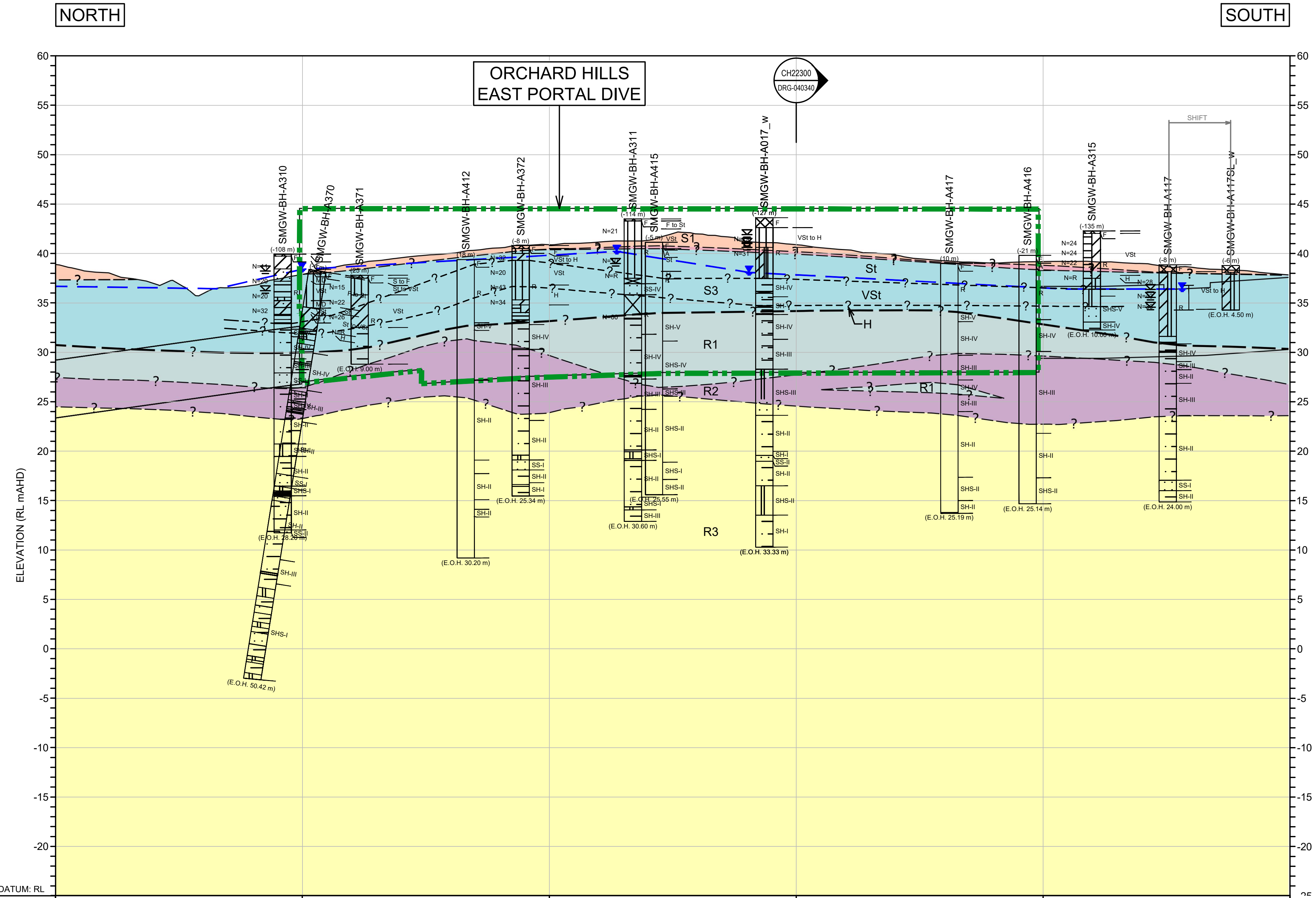
Sydney Metro Western Sydney Airport SBT
SBT North and SBT South
SBT North
GEOTECHNICAL LONG SECTION
CH17243 - CH22500 (SOUTHBOUND)

STATUS: FOR INFORMATION | SHEET 08 OF 09 | ©

DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040330 | REV. A

A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number

Cad File: C:\Users\annette.wilson\AppData\Local\Temp\AcPublish_19096\SMWSASBT-CPG-SWD-SW000-GE-DRG_NORTH_LSECT_A.dwg
Plot Date: 28/03/22 - 12:07
100mm AT FULL SIZE



CHAINAGE (m)	22000	22100	22200	22300	22400	22500
TUNNEL AXIS LEVEL	26.144	29.610				
APPROXIMATE EXISTING GROUND LEVEL						

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	30% S3; 50% SH-IV; 20% SH-III	
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	100% S3	
ESTIMATED GSI		
DIP/DIP DIRECTION OF BEDDING, J1 TO J4		
GROUTING EXPECTATIONS		

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN

SCALES
SCALE 1:2000 AT A3 SIZE
SCALE 1:500 AT A3 SIZE

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DESIGNED	Viet Nguyen	25 Feb 2022
DRG CHECK	Troy Credlin	25 Feb 2022
DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

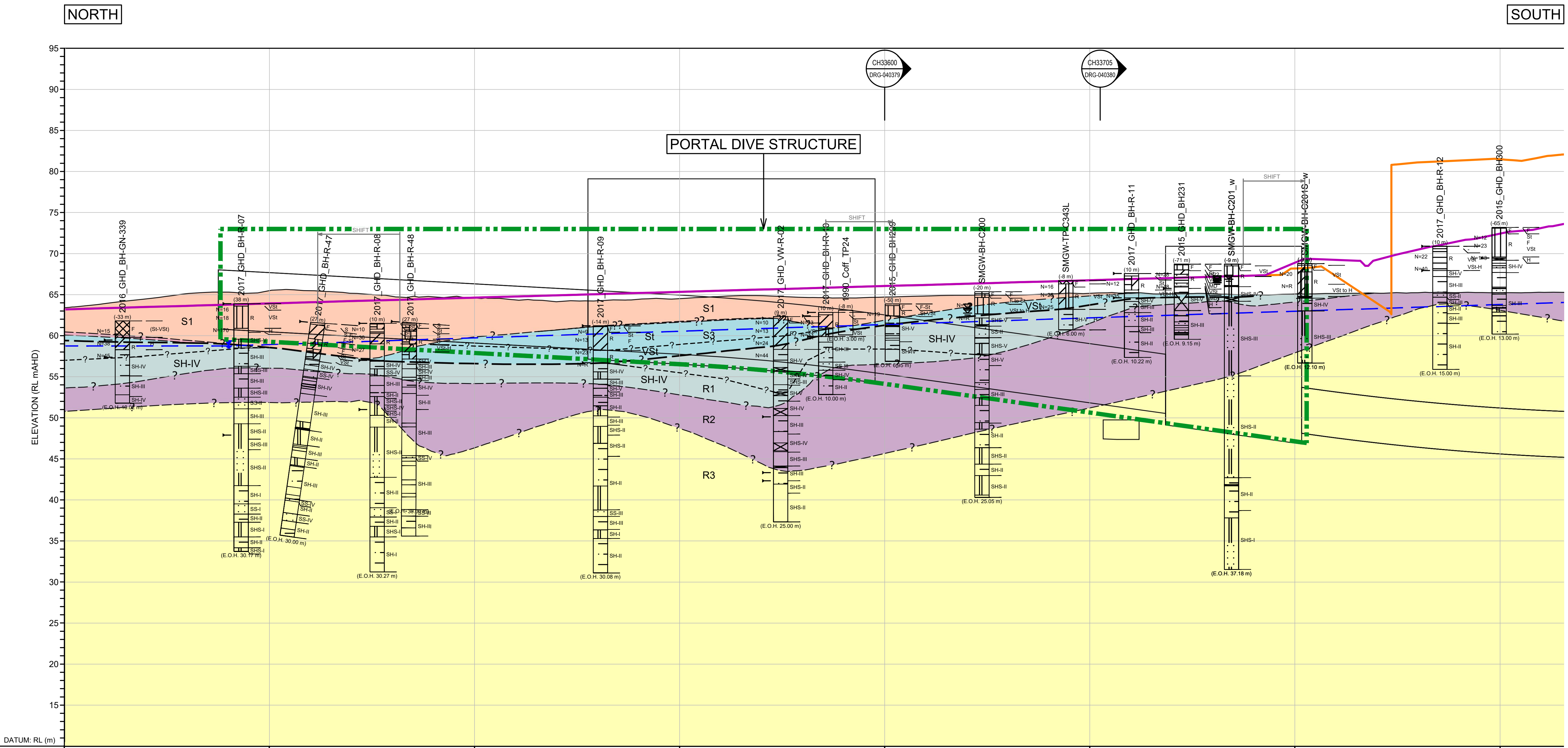
Sydney Metro Western Sydney Airport SBT
SBT North and SBT South
SBT North
GEOTECHNICAL LONG SECTION
CH17243 - CH22500 (SOUTHBOUND)

STATUS: FOR INFORMATION | SHEET 09 OF 09 | ©

DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040331 | REV. A

A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number

Cad File: C:\Users\annette.wilson\AppData\Local\Temp\AcPublish_19096\SMWSASBT-CPG-SWD-SW000-GE-DRG_NORTH_LSECT_A.dwg
Plot Date: 28/03/22 - 12:08
100mm AT FULL SIZE



CHAINAGE (m)	33300	33400	33500	33600	33700	33800	33900
TUNNEL AXIS LEVEL						50.807	48.290
APPROXIMATE EXISTING GROUND LEVEL							

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	NOT APPLICABLE	100% SH-II
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	NOT APPLICABLE	50% SH-III; 50% SH-II
ESTIMATED GSI	R1: 24; R2: 55; R3: 61	R1: 28; R2: 56; R3: 64
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 3°/318°; J1: TO J4: N/A	B: 5°/355°; J1: 75°/317°; J2: 49°/160°; J3 & J4: N/A
GROUTING EXPECTATIONS		

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN

SCALES
SCALE 1:2000 AT A3 SIZE
SCALE 1:500 AT A3 SIZE

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DRG CHECK	Troy Credlin	25 Feb 2022
DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

Sydney Metro Western Sydney Airport SBT
SBT North and SBT South
SBT South
GEOTECHNICAL LONG SECTION
CH33200 - CH39850 (SOUTHBOUND)

STATUS: FOR INFORMATION | SHEET 01 OF 11 | ©

DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040366 | REV. A

A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number

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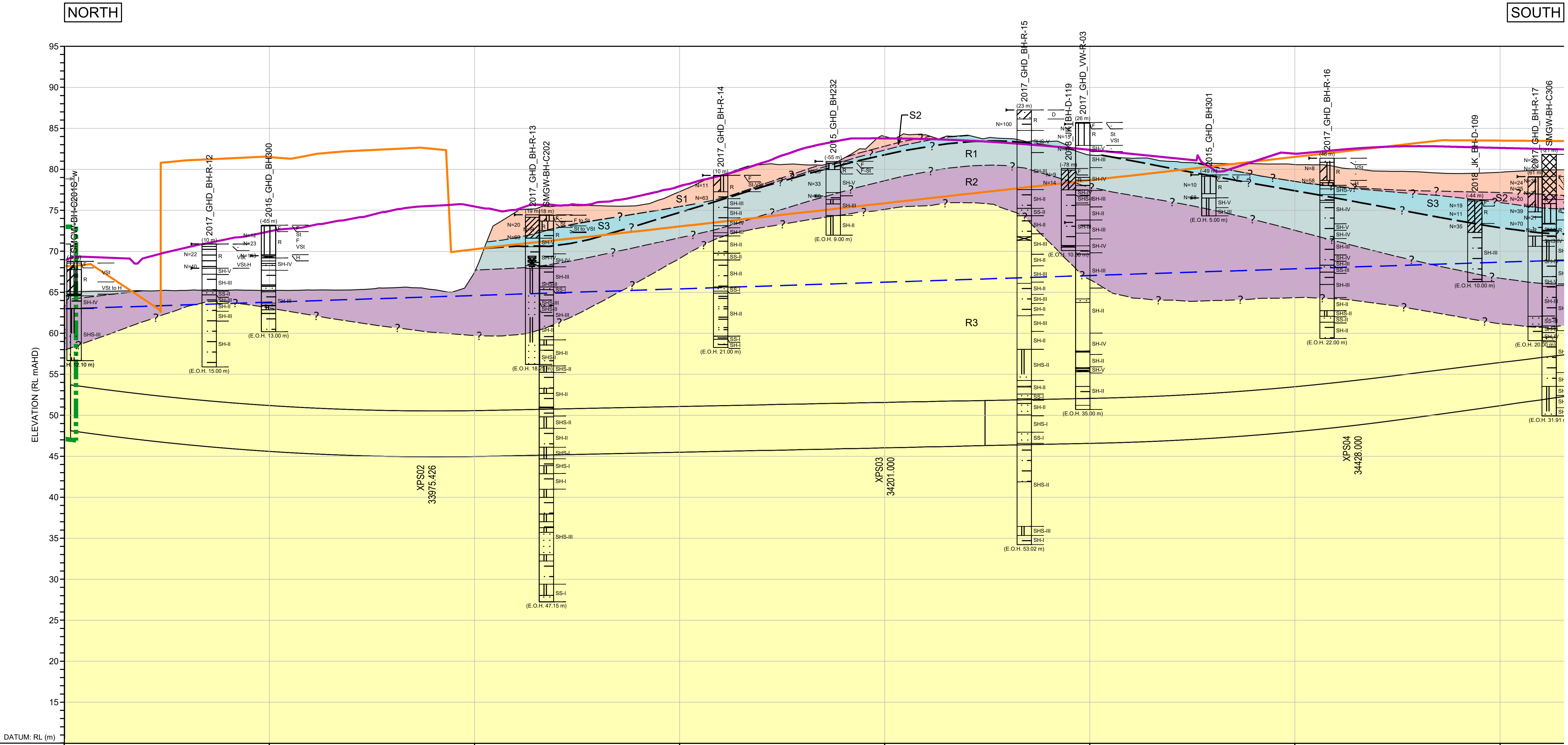
100mm AT FULL SIZE



CHAINAGE (m)	33800	33900	34000	34100	34200	34300	34400	34500
TUNNEL AXIS LEVEL	50.897	48.290	47.790	48.290	48.790	49.294	50.853	53.979
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II	100% SH-II	
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	50% SH-III; 50% SH-II	100% SH-II	
ESTIMATED GSI	R1: 28; R2: 56; R3: 64		
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 5°/355°; J1: 75°/317°; J2: 49°/160°; J3 & J4: N/A		
GROUTING EXPECTATIONS			

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN

SCALES
SCALE 1:2000 AT A3 SIZE
SCALE 1:500 AT A3 SIZE

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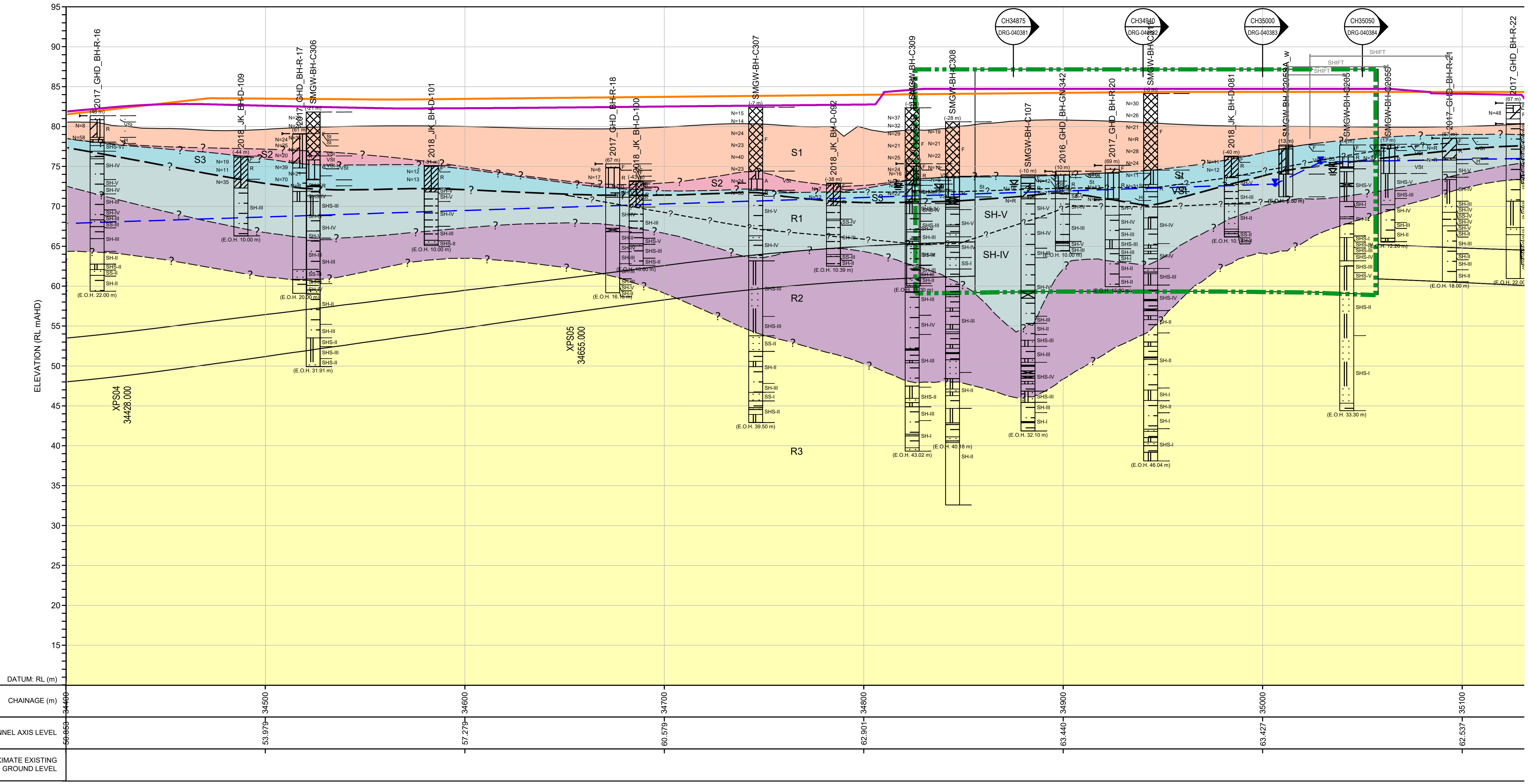
DRG CHECK	Troy Credlin	25 Feb 2022
DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

Sydney Metro Western Sydney Airport SBT
SBT North and SBT South
SBT South
GEOTECHNICAL LONG SECTION
CH33200 - CH39850 (SOUTHBOUND)

STATUS: FOR INFORMATION | SHEET 02 OF 11 | ©

DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040367 | REV. A

A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number



ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL		100% SH-II	100% SH-III	NOT APPLICABLE	10
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE		40% SH-IV; 40% SH-III; 20% SH-II	20% S3; 50% SH-IV; 30% SH-III	NOT APPLICABLE	20% SH-V; 3(
ESTIMATED GSI			R1: 29; R2: 43; R3: N/A	R1: 30; R2: 49; R3: 62	
DIP/DIP DIRECTION OF BEDDING, J1 TO J4			B: 14°/201°; J1: 58°/011°; J2: 85°/188°; J3: 53°/205°; J4: N/A	B: 4°/016°; J1: 60°/007°; J2: 63°/189°; J3 & J4: N/A	B: 4°/016°; J1: 60°/0
GROUTING EXPECTATIONS					

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN

SCALES
SCALE 1:2000 AT A3 SIZE
SCALE 1:500 AT A3 SIZE

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SERVICE PROVIDERS

DRAWN	Annette Wilson	25 Feb 2022
DESIGNED	Viet Nguyen	25 Feb 2022
DRG CHECK	Troy Credlin	25 Feb 2022
DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

Sydney Metro Western Sydney Airport SBT

SBT North and SBT South
SBT South
GEOTECHNICAL LONG SECTION
CH33200 - CH39850 (SOUTHBOUND)

STATUS: FOR INFORMATION | SHEET 03 OF 11 | ©
DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040368 | REV. A

A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number

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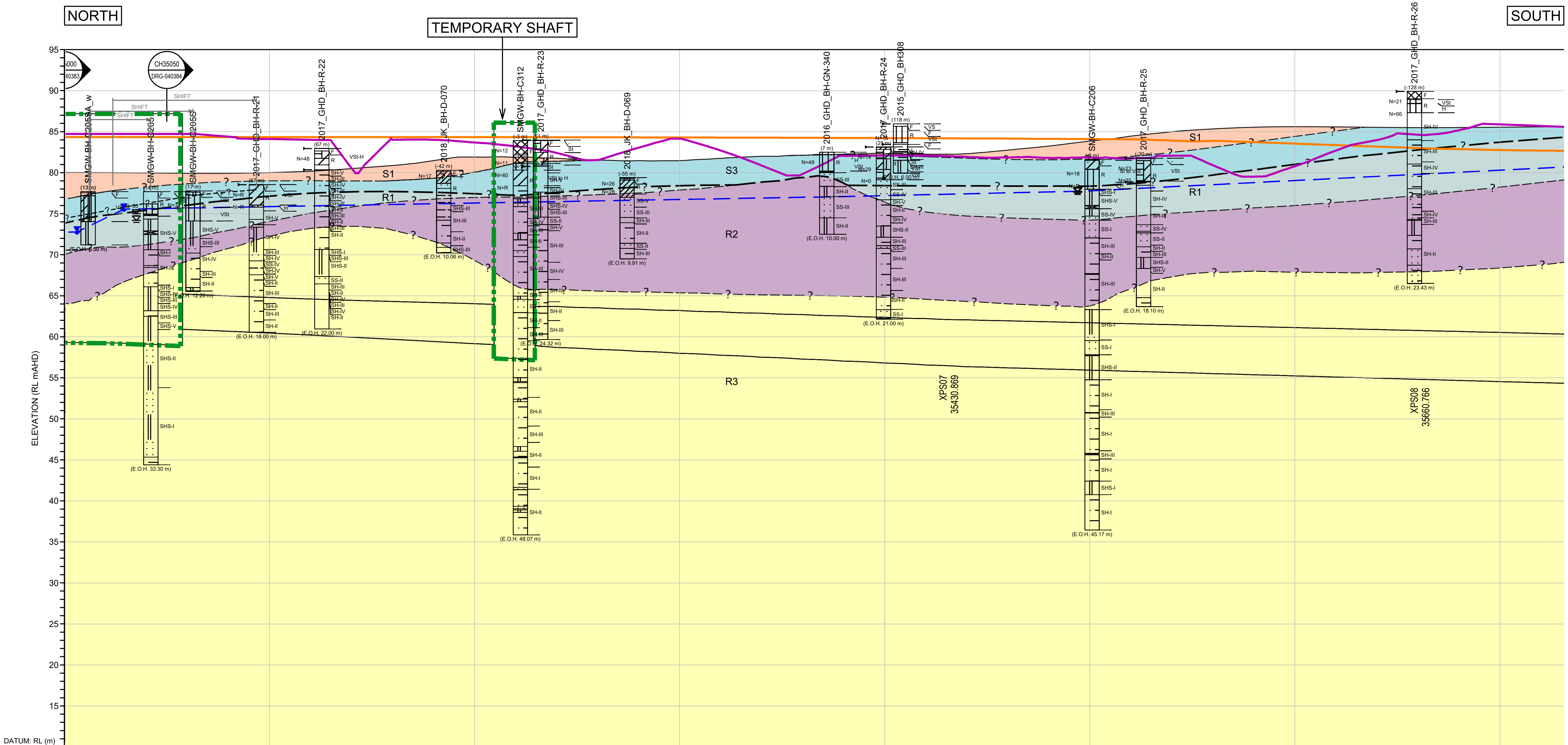
Plot Date: 28/03/22 - 14:00
100mm AT FULL SIZE



CHAINAGE (m)	35000	35100	35200	35300	35400	35500	35600	35700
TUNNEL AXIS LEVEL	63.427	62.537	61.527	60.527	59.549	58.935	58.323	57.711
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II	100% SH-II	100% SH-II
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	20% SH-V; 30% SH-III; 50% SH-II	90% SH-III; 10% SH-II	90% SH-III; 10% SH-II
ESTIMATED GSI			
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 4°/016°; J1: 60°/007°; J2: 63°/189°; J3 & J4: N/A	B: 8°/013°; J1: 58°/320°; J2: 52°/120°; J3 & J4: N/A	
GROUTING EXPECTATIONS			

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN

SCALES
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SCALE 1:500 AT A3 SIZE

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DRG CHECK	Troy Credlin	25 Feb 2022
DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

Sydney Metro Western Sydney Airport SBT
SBT North and SBT South
SBT South
GEOTECHNICAL LONG SECTION
CH33200 - CH39850 (SOUTHBOUND)

STATUS: FOR INFORMATION | SHEET 04 OF 11 | ©

DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040369 | REV. A

A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number

Cad File: F:\1. Projects\4. SYD-GEOTECH\CS\13. SYDGE29000\SYDGE29257S WSA SBT\04_CAD\SMWSASBT-CPG-SWD-SW000-GE-DRG_SOUTH_LSECT_A.dwg
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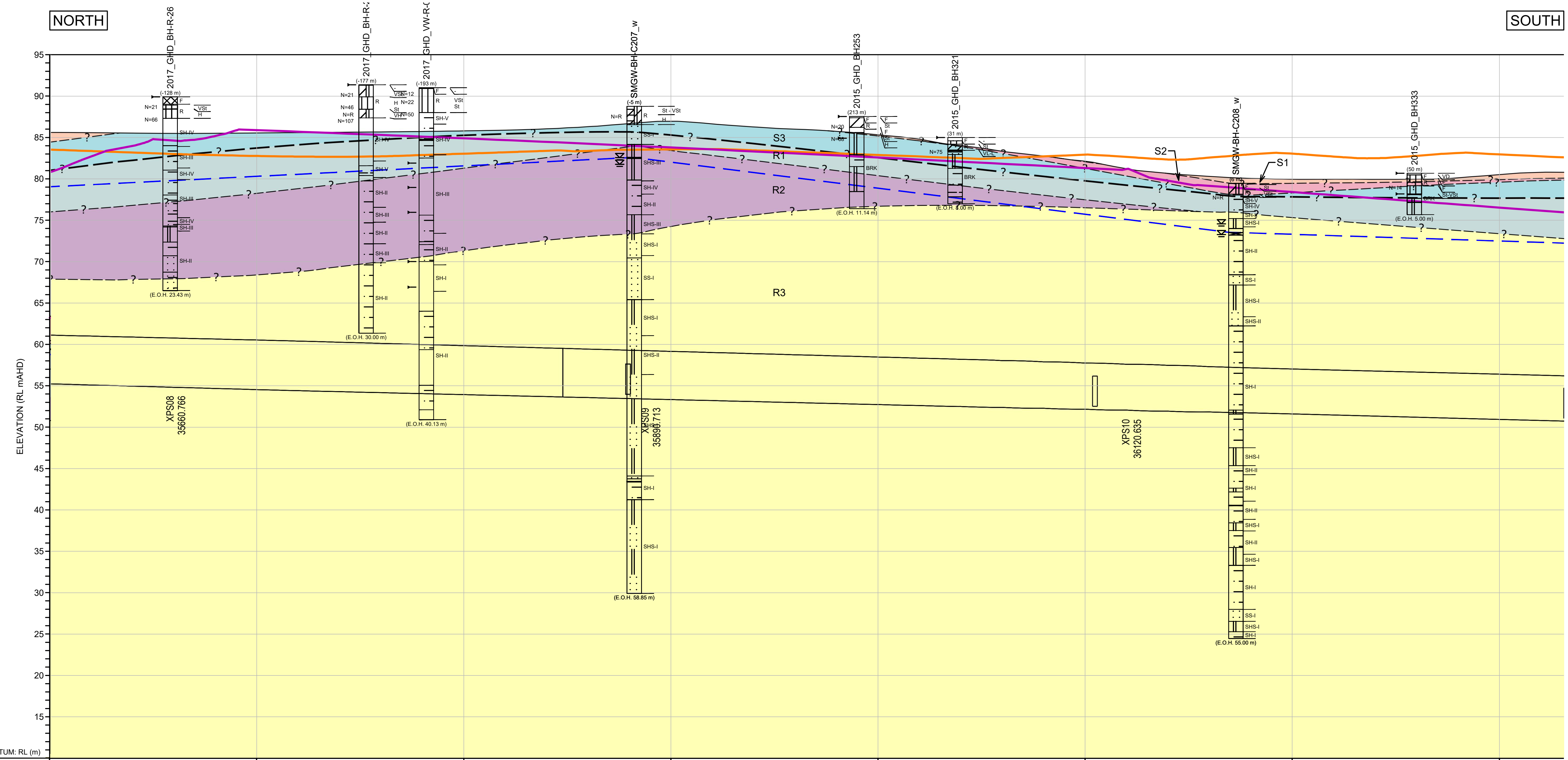
100mm AT FULL SIZE



CHAINAGE (m)	35600	35700	35800	35900	36000	36100	36200	36300
TUNNEL AXIS LEVEL	58.323	57.711	57.099	56.450	55.799	55.148	54.497	53.846
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II	100% SH-II
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	90% SH-III; 10% SH-II	100% SH-II
ESTIMATED GSI		
DIP/DIP DIRECTION OF BEDDING, J1 TO J4		
GROUTING EXPECTATIONS		

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN

SCALES
SCALE 1:2000 AT A3 SIZE
SCALE 1:500 AT A3 SIZE

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SERVICE PROVIDERS

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DESIGNED	Viet Nguyen	25 Feb 2022
DRG CHECK	Troy Credlin	25 Feb 2022
DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

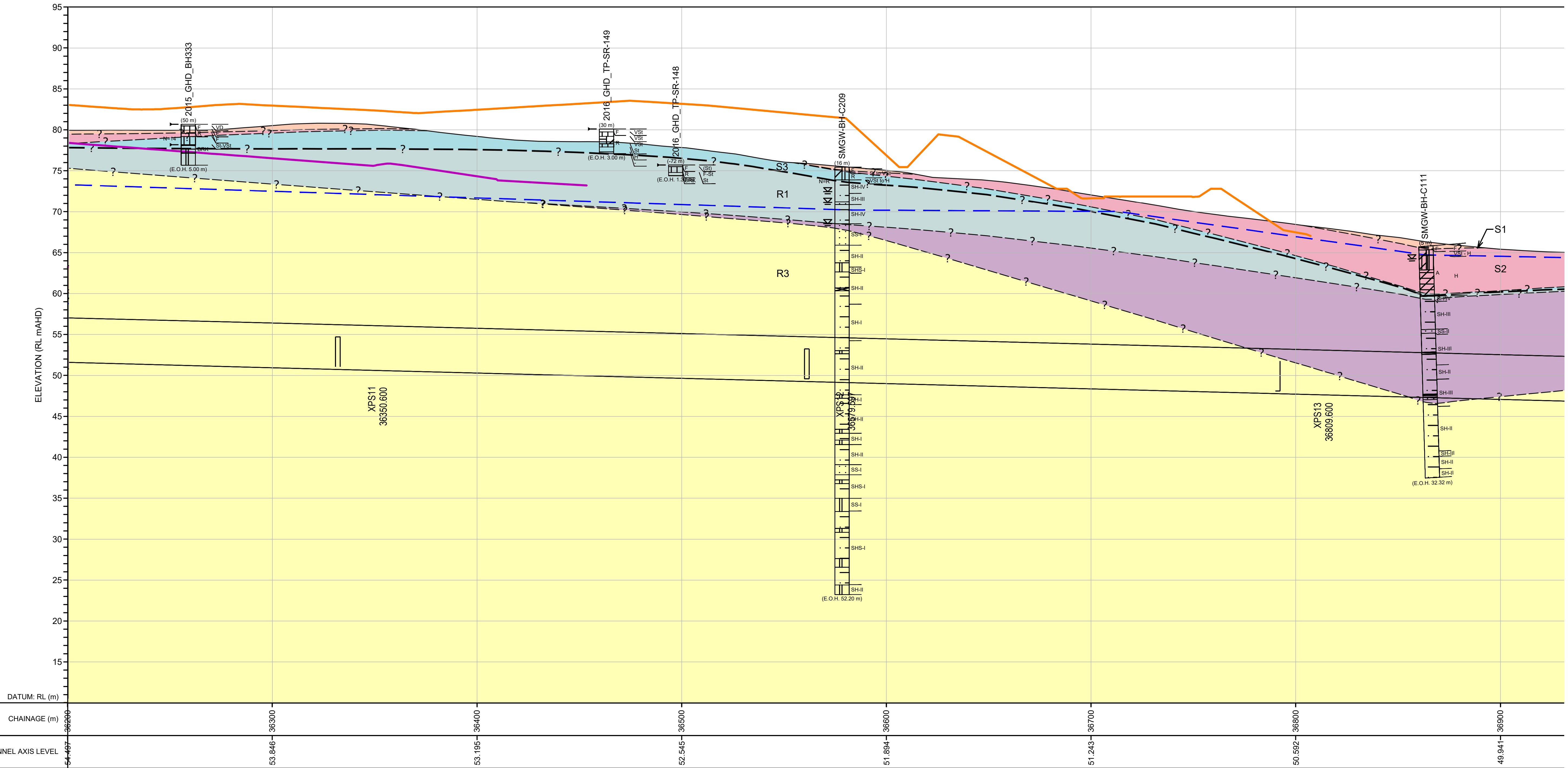
Sydney Metro Western Sydney Airport SBT
SBT North and SBT South
SBT South
GEOTECHNICAL LONG SECTION
CH33200 - CH39850 (SOUTHBOUND)

STATUS: FOR INFORMATION | SHEET 05 OF 11 | ©

DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040370 | REV. A

A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number

Cad File: F:\1. Projects\4. SYD-GEOTECH\CS\13. SYDGE290000\SYDGE292575 WSA SBT\04_CAD\SMWSASBT-CPG-SWD-SW000-GE-DRG_SOUTH_LSECT_A.dwg
Plot Date: 28/03/22 - 14:03
100mm AT FULL SIZE



ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II	100% SH-II	100% SH-II	100% SH-III
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	100% SH-II	50% SH-III; 50% SH-II	90% SH-III; 10% SH-II	30% S2; 70% SH-III
ESTIMATED GSI				
DIP/DIP DIRECTION OF BEDDING, J1 TO J4				B: 3°/355°; J1: 69°/011°; J2: 51°/127°; J3: 81°/
GROUTING EXPECTATIONS				

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

Cad File: F:\1. Projects\4. SYD-GEOTECH\CS\13. SYDGE290000\SYDGE29257S WSA SBT\04_CAD\SMWSASBT-CPG-SWD-SW000-GE-DRG_SOUTH_LSECT_A.dwg

Plot Date: 28/03/22 - 14:05

100mm AT FULL SIZE

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN

SCALES
SCALE 1:2000 AT A3 SIZE
SCALE 1:500 AT A3 SIZE

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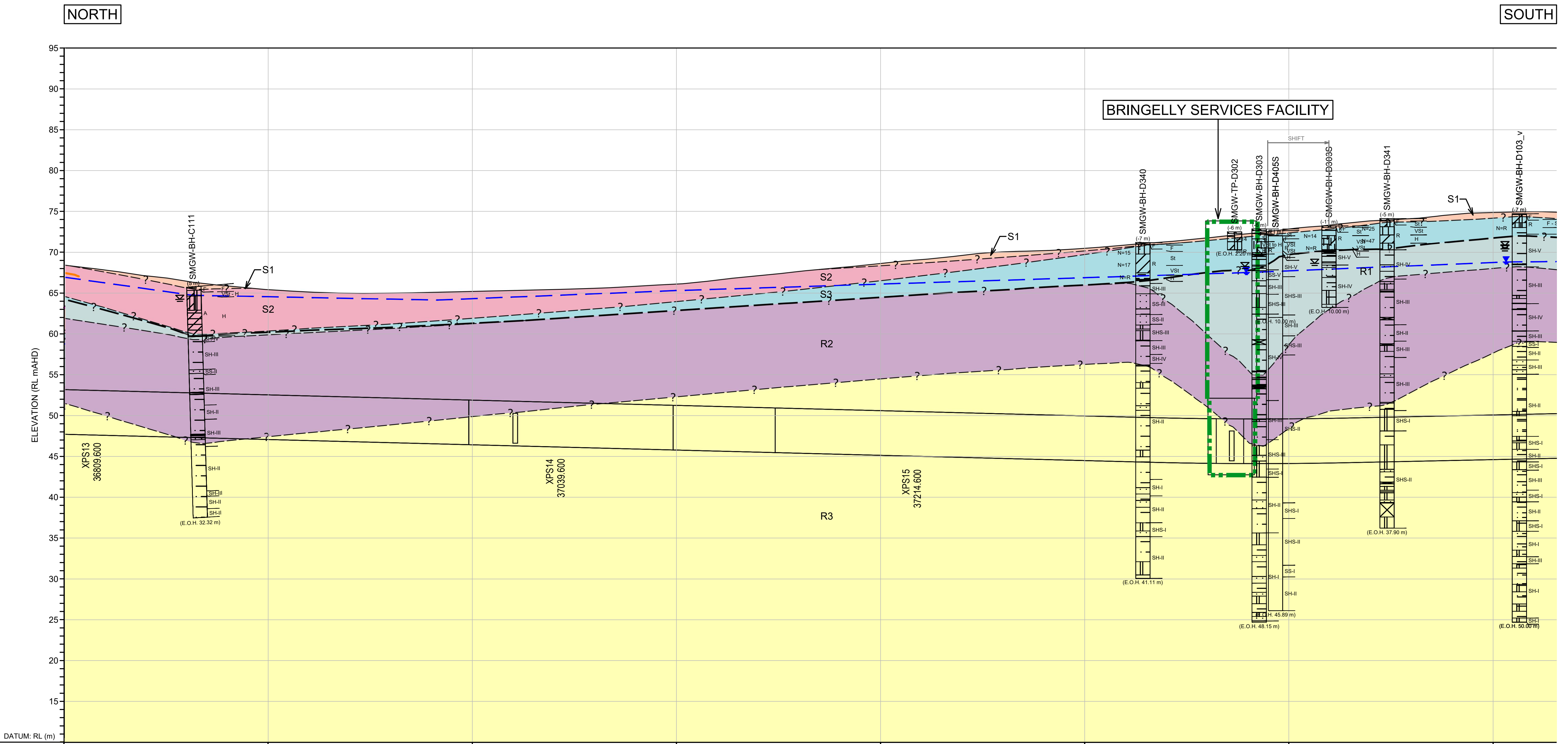
DESIGNED	Viet Nguyen	25 Feb 2022
DRG CHECK	Troy Credlin	25 Feb 2022
DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

Sydney Metro Western Sydney Airport SBT
SBT North and SBT South
SBT South
GEOTECHNICAL LONG SECTION
CH33200 - CH39850 (SOUTHBOUND)

STATUS: FOR INFORMATION | SHEET 06 OF 11 | ©

DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040371 | REV. A

A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number



CHAINAGE (m)	36800	36900	37000	37100	37200	37300	37400	37500
TUNNEL AXIS LEVEL	50.592	49.941	49.290	48.639	47.989	47.338	46.890	47.315
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-III	100% SH-II	100% SH-II	100% SH-II	
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	30% S2; 70% SH-III	100% SH-III	50% SH-III; 50% SH-II	100% SH-III	
ESTIMATED GSI				R1: 46; R2: 55; R3: 67	
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 3°/355°; J1: 69°/011°; J2: 51°/127°; J3: 81°/219°; J4: 69°/057°	PENDING BY NEW ATV		B: 12°/002°; J1: 81°/010°; J2 TO J4: N/A	
GROUTING EXPECTATIONS					

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN

SCALES
SCALE 1:2000 AT A3 SIZE
SCALE 1:500 AT A3 SIZE

CLIENT

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DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

Sydney Metro Western Sydney Airport SBT
SBT North and SBT South
SBT South
GEOTECHNICAL LONG SECTION
CH33200 - CH39850 (SOUTHBOUND)

STATUS: FOR INFORMATION | SHEET 07 OF 11 | ©

DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040372 | REV. A

A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number

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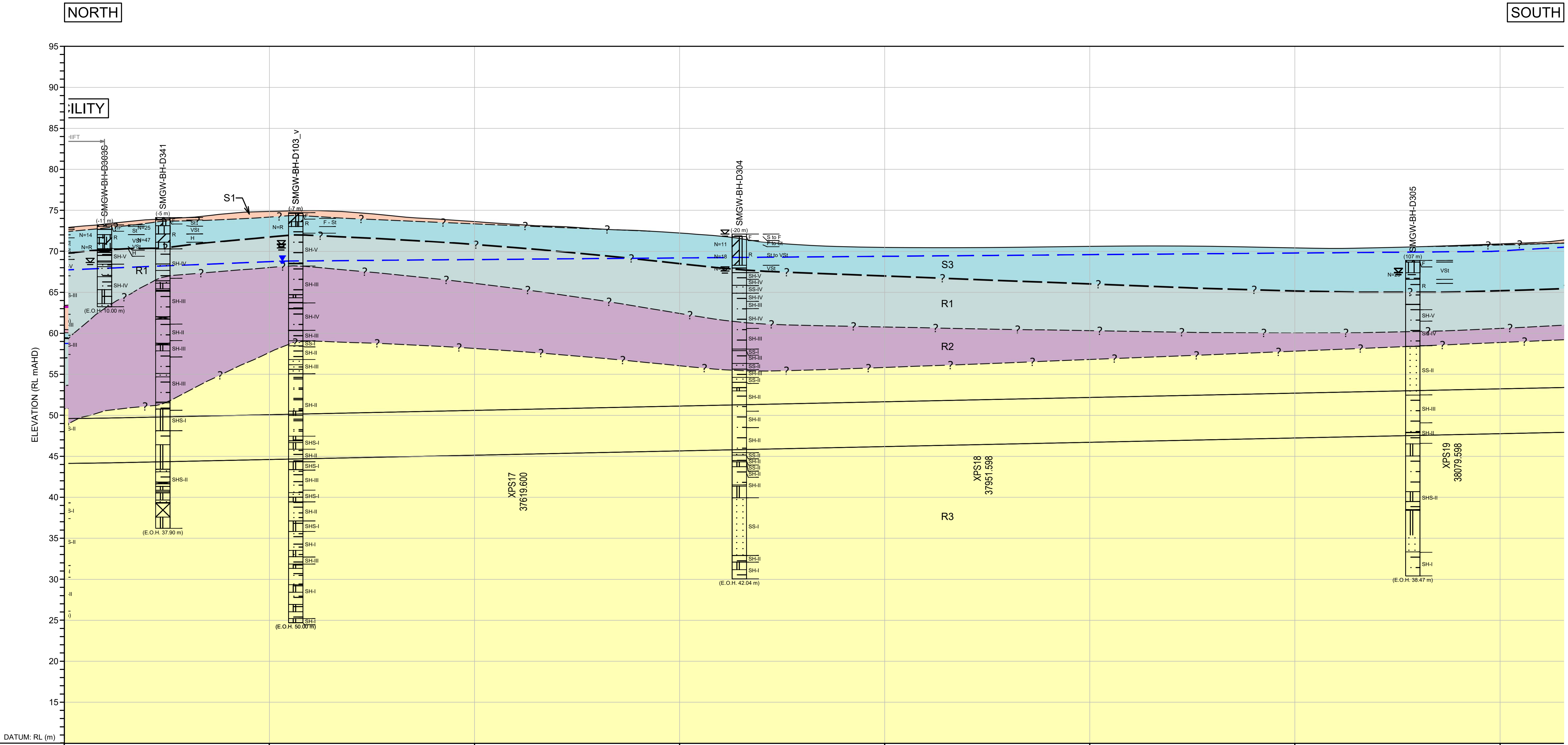
Plot Date: 28/03/22 - 14:06
100mm AT FULL SIZE

Cad File: F:\1. Projects\4. SYD-GEOTECHNICS\13. SYDGE290000\SYDGE292575 WSA SBT\04_CAD\SMWSASBT-CPG-SWD-SW000-GE-DRG_SOUTH_LSECT_A.dwg   Plot Date: 28/03/22 - 14:07   100mm AT FULL SIZE



CHAINAGE (m)	37400	37500	37600	37700	37800	37900	38000	38100
TUNNEL AXIS LEVEL	46.890	47.315	47.840	48.365	48.890	49.415	49.940	50.465
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II	100% SH-II	100% SH-II
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	100% SH-III	50% SH-III; 50% SH-II	30% SH-V; 30% SH-III; 40% SH-II
ESTIMATED GSI	R1: 46; R2: 55; R3: 67		
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 12°/002°; J1: 81°/010°; J2 TO J4: N/A	B: 7°/145°; J1: 49°/339°; J2: N/A; J3: 74°/248°; J4: 49°/095°	
GROUTING EXPECTATIONS			

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN

SCALES
SCALE 1:2000 AT A3 SIZE (0 10 20 30 40 50 60m)
SCALE 1:500 AT A3 SIZE (0 2.5 5.0 7.5 10 12.5 15m)

CLIENT: CPB CONTRACTORS, Ghella

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SERVICE PROVIDERS: GEODATA, PSM, Robert Bird Group, TETRA TECH COFFEY, ARCADIS

DRAWN	Annette Wilson	25 Feb 2022
DESIGNED	Viet Nguyen	25 Feb 2022
DRG CHECK	Troy Credlin	25 Feb 2022
DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

Sydney Metro Western Sydney Airport SBT
SBT North and SBT South
SBT South
GEOTECHNICAL LONG SECTION
CH33200 - CH39850 (SOUTHBOUND)

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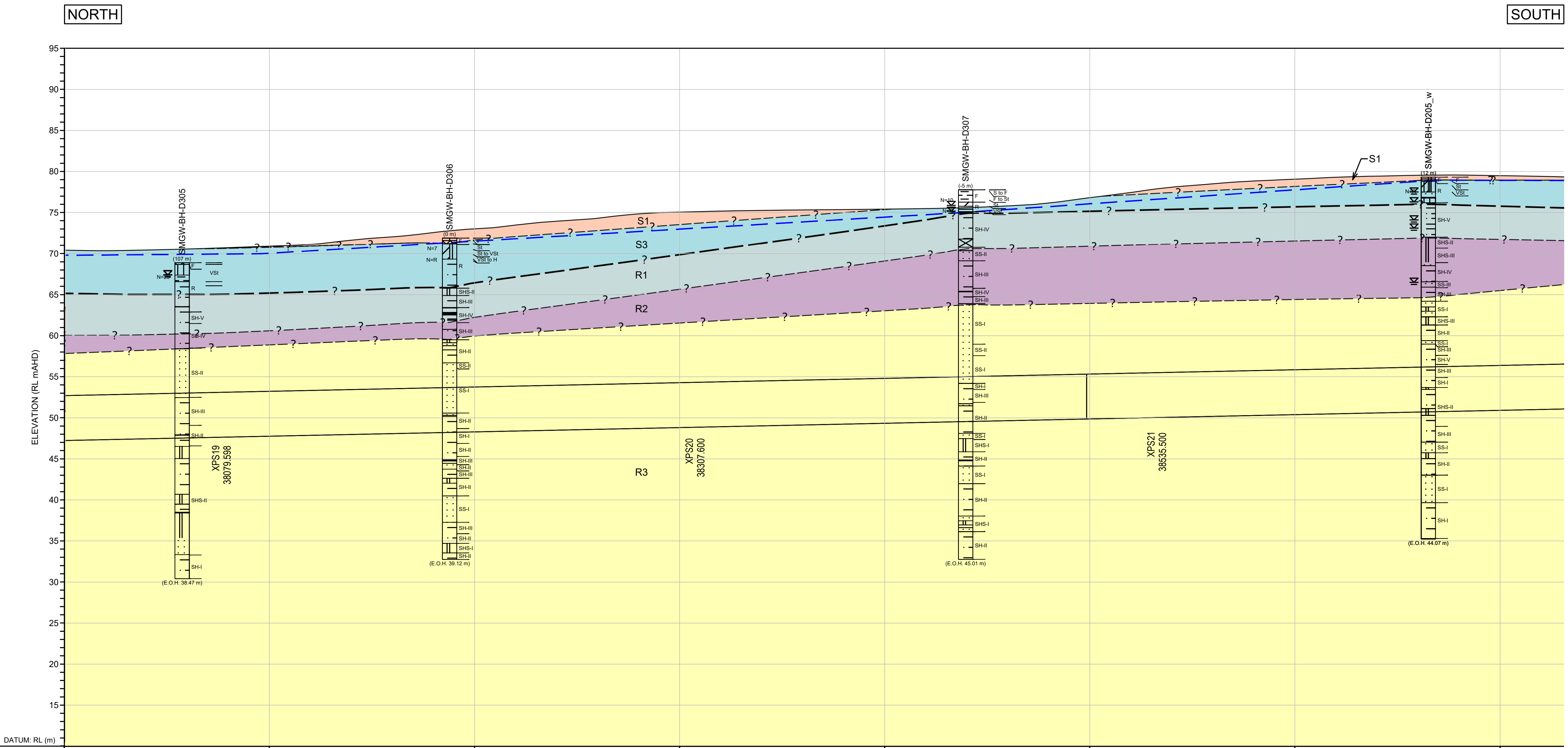
A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number



CHAINAGE (m)	38000	38100	38200	38300	38400	38500	38600	38700
TUNNEL AXIS LEVEL	49.940	50.465	50.990	51.515	52.040	52.565	53.090	53.615
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II	100% SH-II	100% SH-II
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	30% SH-V; 30% SH-III; 40% SH-II	40% SH-III; 60% SH-II	40% SH-III; 60% SH-II
ESTIMATED GSI			
DIP/DIP DIRECTION OF BEDDING, J1 TO J4			
GROUTING EXPECTATIONS			

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN

SCALES
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SCALE 1:500 AT A3 SIZE (0 2.5 5.0 7.5 10 12.5 15m)

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SERVICE PROVIDERS

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DESIGNED	Viet Nguyen	25 Feb 2022
DRG CHECK	Troy Credlin	25 Feb 2022
DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

Sydney Metro Western Sydney Airport SBT
SBT North and SBT South
SBT South
GEOTECHNICAL LONG SECTION
CH33200 - CH39850 (SOUTHBOUND)

STATUS: FOR INFORMATION | SHEET 09 OF 11 | ©
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A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number

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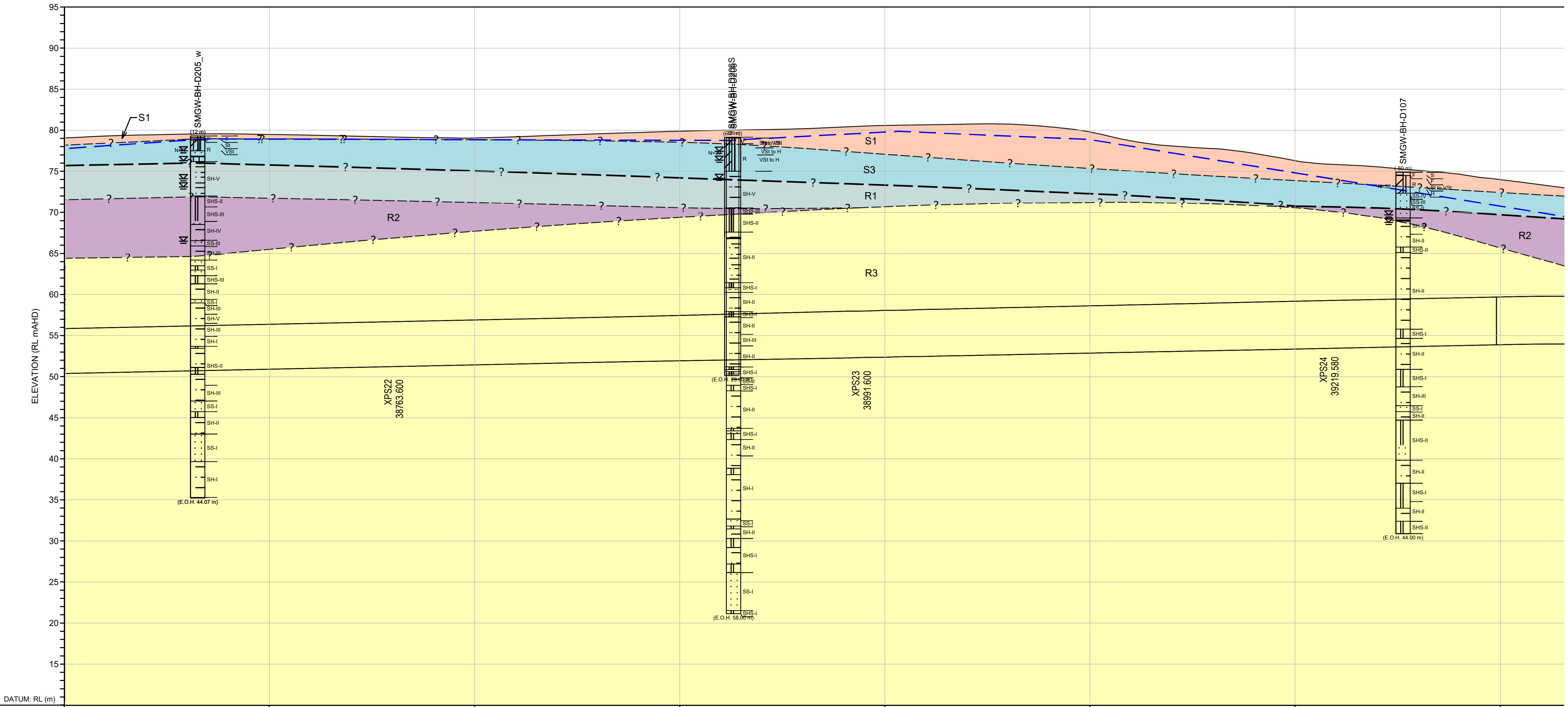
NORTH

SOUTH



CHAINAGE (m)	38600	38700	38800	38900	39000	39100	39200	39300
TUNNEL AXIS LEVEL	53.090	53.615	54.140	54.665	55.190	55.715	56.240	56.765
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL	100% SH-II	100% SH-II	100% SH-II
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE	40% SH-III; 60% SH-II	100% SH-II	50% SH-III; 50% SH-II
ESTIMATED GSI			
DIP/DIP DIRECTION OF BEDDING, J1 TO J4			B: 6°/330°; J1: N/A; J2: 57°/140°; J:
GROUTING EXPECTATIONS			

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN

SCALES
SCALE 1:2000 AT A3 SIZE
SCALE 1:500 AT A3 SIZE

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DRG CHECK	Troy Credlin	25 Feb 2022
DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

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SBT South
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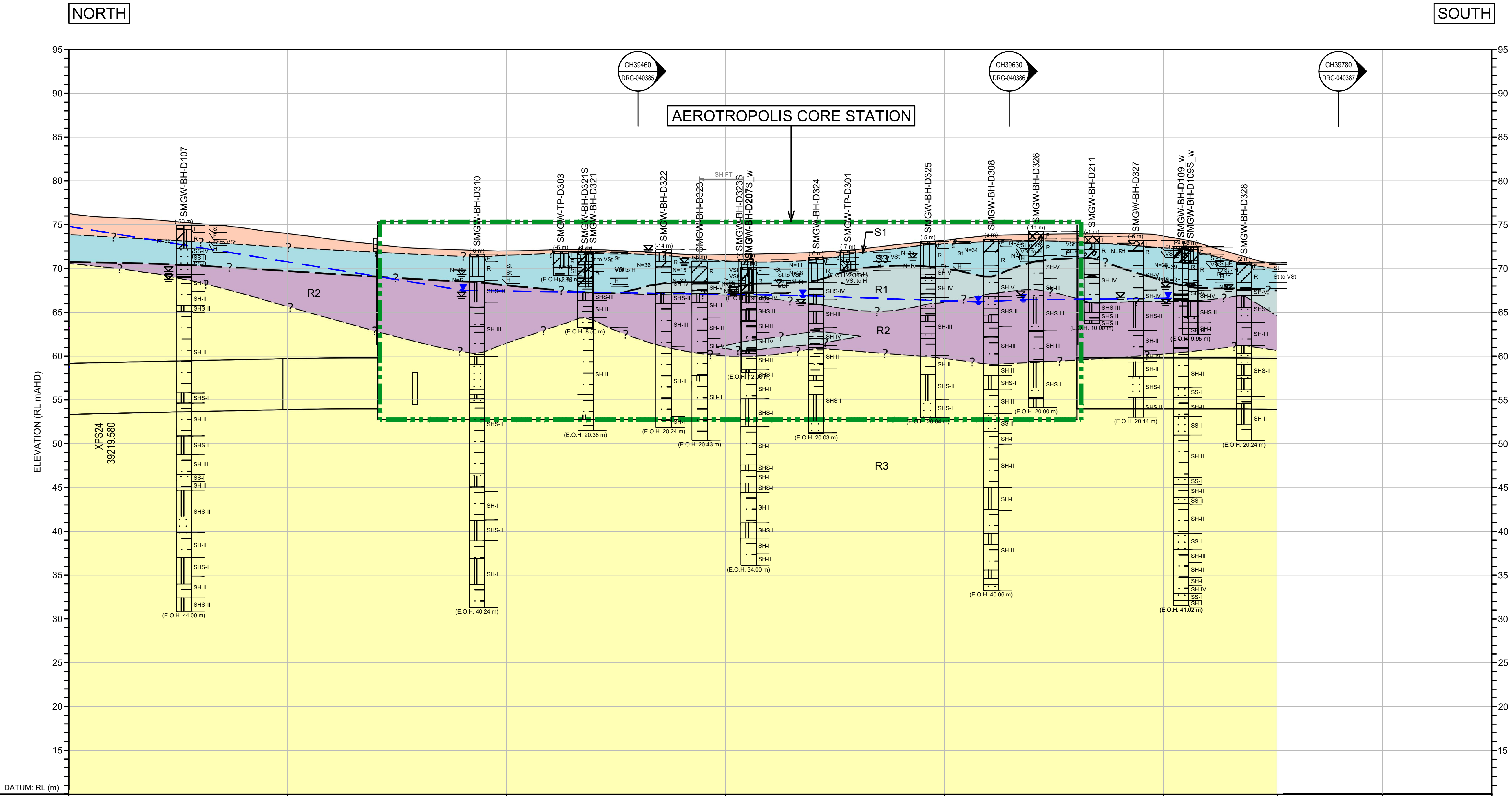
DRG No. SMWSASBT-CPG-SWD-SW000-GE-DRG-040375 | REV. A

A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number



CHAINAGE (m)	39200	39300	39400	39500	39600	39700	39800	39850
TUNNEL AXIS LEVEL	56.240	56.765	56.865	56.865	56.865	56.865		
APPROXIMATE EXISTING GROUND LEVEL								

ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN TUNNEL		100% SH-II	NOT APPLICABLE
ESTIMATED PERCENTAGE OF ROCK CLASS WITHIN SUPPORT ZONE		50% SH-III; 50% SH-II	NOT APPLICABLE
ESTIMATED GSI			
DIP/DIP DIRECTION OF BEDDING, J1 TO J4	B: 6°/330°; J1: N/A; J2: 57°/140°; J3 & J4: N/A		B: 1°/289°; J1: 82°/358°; J2: 55°/167°; J3: N/A; J4: 39°/45°
GROUTING EXPECTATIONS			

Cad File: F:\1. Projects\4. SYD-GEOTECH\CS\13. SYDGE290000\SYDGE292575 WSA SBT\04_CAD\SMWSASBT-CPG-SWD-SW000-GE-DRG_SOUTH_LSECT_A.dwg

Plot Date: 28/03/22 - 14:19

100mm AT FULL SIZE

NOTES:
1. REFER TO DRAWING SMWSASBT-CPG-SWD-SW000-GE-DRG-040305 FOR GENERAL NOTES AND LEGENDS.

REV.	BY	DATE	DESCRIPTION	APPD.
A	AW	25/03/2022	DEVELOPED CONCEPT DESIGN	VN

SCALES
SCALE 1:2000 AT A3 SIZE (0 10 20 30 40 50 60m)
SCALE 1:500 AT A3 SIZE (0 2.5 5.0 7.5 10 12.5 15m)

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DESIGN CHECK	Ching Dai	25 Feb 2022
APPROVED	Troy Credlin	25 Feb 2022

Sydney Metro Western Sydney Airport SBT

SBT North and SBT South
SBT South
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A3 Original | Co-ordinate System: Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied | NOTE: Do not scale from this drawing. | ALT. DRG No. Alternate Document Number

Annexure C Groundwater Dependent Ecosystem Summary and Figures

Terrestrial GDEs

There are a large number of native vegetation stands mapped by the GDE atlas (BoM, 2021) as having a moderate and high likelihood of groundwater dependence. The main areas of intact vegetation communities that are indicated to likely be groundwater dependent were identified as areas of:

- Cumberland River Flat Forest
- Cumberland Shale Plains Woodland
- Swamp Oak Floodplain Forest
- River Flat Forest
- Shale Gravel Transition Forest
- Cumberland Shale Plains Woodland.

Vegetation surveys of these and other mapped areas have not been reviewed and further commentary around the intactness and value of these vegetation stands has not yet been considered. They are assumed to be healthy, mature native vegetation of high ecological value.

Cumberland Shale Plain Woodland is the most widely distributed form of Cumberland Plain Woodland in the project area. Published descriptions of this ecosystem notes that Bursaria spinosa is the dominant shrub species and there are canopy trees such as grey box (E.moluccana), forest red gum (E.tereticornis), spotted gum (Corymbia maculata) and thin leaved stringybark (E.eugenioides) (NSW National Parks and Wildlife Service, 2004).

These mature trees are likely to have root zones that could extend several metres to the capillary fringe and would mostly be considered facultative GDEs, particularly outside of riparian corridors.

The Cumberland Plain Woodland vegetation class, which includes the Cumberland Shale Plain Woodland, is listed as an endangered ecological community under the *Threatened Species Conservation Act 1995* (NSW) (TSC Act) and the *Environmental Protection and Biodiversity Conservation Act 1999* (Commonwealth) (EPBC Act).

Stands of Cumberland River Flat Forest present in the riparian zone along South Creek to the east and southeast of Orchard Hills station also have a high conservation value. It is listed as endangered under the TSC Act and critically endangered under the EPBC Act.

The river flat forest is commonly comprised of Eucalyptus tereticornis (forest red gum), E. amplifolia (cabbage gum), Angophora floribunda (rough-barked apple) and A. subvelutina (broad-leaved apple). Groundwater is expected to be shallow in the riparian zone, would be maintained by recharge from South Creek during dry periods, and would likely provide year-round water to this groundwater dependent ecosystem.

This terrestrial GDE assessment has focussed on moderate and high likelihood terrestrial GDEs where they exist within close proximity to structures that will require dewatering during construction. These areas are discussed in the following sections.

St Marys Station

There are no mapped or suspected terrestrial GDEs within 1 km of the St Marys station. The closest area of mapped terrestrial GDE is approximately 1.3 km to the northeast at Boronia Park (Figure C-2).

Claremont Meadows facility

A high likelihood terrestrial GDE is located approximately 80 m east and southeast of the proposed Claremont Meadows facility. Local groundwater level monitoring at SMGW-BJ-A304 and SMGW-BH-A109S confirm groundwater is in the order of 2.0 to 2.5 m below ground level (mbgl) and would be expected to support mature native vegetation for some of their water needs.

Vegetation to the north of the facility along the ephemeral Claremont Creek riparian zone is not mapped as a terrestrial GDE, however it is likely to rely on the subsurface presence of groundwater in the alluvial sediments mapped along the creek line. This vegetation may be considered obligate, but further investigation would be required to confirm this assumption.

Orchards Hill Station

Most stands of mature native vegetation in the vicinity of the Orchards Hill Station are considered high likelihood GDEs (Figure C-3). The native vegetation in the area immediately surrounding the proposed station is predominantly Cumberland Shale Plains Woodland. Groundwater levels measured along the project alignment confirm a relatively shallow water table ranging between 3 to 5 m below ground level. Larger trees (particularly forest red gum, spotted gum and cabbage gum) would have a root zone that could extend to the capillary fringe and would likely be considered facultative GDEs.

Areas of Cumberland River Flat Forest also exist south of Lansdowne Road and east along South Creek. Groundwater is expected to be shallow in the riparian zone, would be maintained by interaction with South Creek during dry periods, and would likely provide year-round water to this groundwater dependent ecosystem. Some or all of the vegetation in the riparian zone could be considered obligate, but further investigation would be required to confirm this assumption.

Bringelly services facility

The Bringelly Services facility is located within approximately 30 m of a 1.3 ha stand of Cumberland Shale Plains Woodland that is mapped as a high likelihood GDE. This small stand of large trees appears in aerial photographs to be located on private property and may be highly altered from its natural condition. Ecological surveys of this vegetation may be warranted where there is potential impact.

Groundwater level monitoring at SMGW-BH-D103 indicates that the depth to groundwater is approximately 7.5 mbgl in the area. While this groundwater level is potentially approaching the maximum root depth of some large native trees (such as red gum) the degree of facultative groundwater dependence requires further site investigation to confirm.

Cumberland Shale Plains Woodland is also present 300 m north towards Badgerys Creek where this vegetation class may also be present as riparian vegetation along the creek line (Figure C-5). Groundwater levels are likely to be shallower towards Badgerys Creek (likely <5mbgl) and likelihood of groundwater dependence is expected to be high. Vegetation may be both facultative and obligate in this area.

Aerotropolis core

Cumberland River Flat Forest follows the riparian zone of Thompsons Creek and its minor tributaries and is listed as a high potential terrestrial GDE (Figure C-5). Other isolated stands of Cumberland River Flat Forest exist to the southwest and northwest of the station which are mapped with moderate potential for groundwater dependence. The condition of this vegetation is unknown and is mapped across private land which is likely to be highly altered from its natural condition.

Aquatic GDEs

The SBT Works are located within the South Creek catchment, which forms part of the wider Hawkesbury catchment. There are no high priority aquatic GDEs listed in the Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources (2011) within 1 km of the SBT Works.

Several creeks, including South Creek, exist within 1 km of the project area and may be groundwater dependent. This desktop GDE assessment has included reviewing the GDE Atlas (BoM, 2019), the Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources, and relevant Technical Papers attached to the EES to provide an assessment of their potential dependence on groundwater.

Surface water features with suspected groundwater dependence are discussed in the following sections.

South Creek

South Creek flows in a northerly direction typically at more than a kilometre to the east of the project alignment, except towards the north where the alignment approaches and crosses the creek (Figure C-1).

The full length of South Creek is mapped as a high likelihood GDE from national assessments, meaning that the surface water flow in South Creek is likely to rely on baseflow discharge from groundwater to some extent. South Creek is likely to be in direct hydraulic connection with the alluvial sediments which overlies the Bringelly shale aquifer. Groundwater from the Bringelly shale aquifer is expected to discharge upwards to the alluvial aquifer which in turn, contributes baseflow to South Creek.

South Creek was noted to be highly altered from its natural state due to the surrounding rural, agricultural and urban land uses. Despite this, it is listed as a 'Type 1 – Highly sensitive key fish habitat' by the NSW Department of Primary Industries (2013). The EES indicated the potential for Australian Grayling, Macquarie Perch, and Murray Cod to be present at the site, which are listed as threatened species by EPBC Act. The macroinvertebrate communities present in South Creek were noted to have a high tolerance to severe pollution levels but included two threatened invertebrate species listed by the Fisheries Management Act (1994); Adam’s Emerald Dragonfly and the Sydney Hawk Dragonfly.

Badgerys Creek

Badgerys Creek runs along the southern boundary of the Western Sydney International development site and discharges to South Creek. The reference design includes tunnelling beneath Badgerys Creek to the south of the airport site.

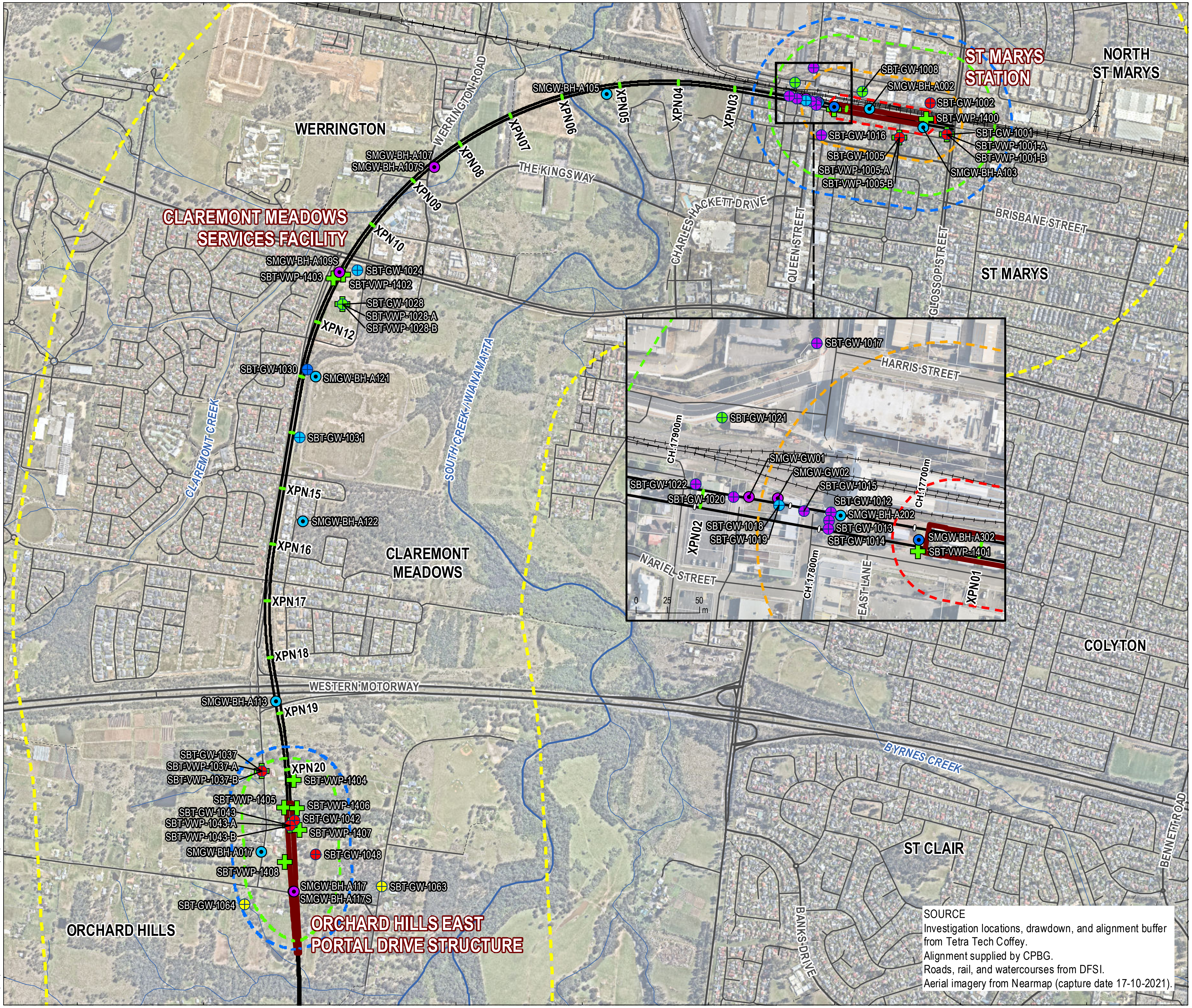
While Badgerys Creek is not listed as a potential aquatic GDE by the GDE atlas, the available groundwater level data indicates that it is likely to have variable groundwater interaction along its length, with some sections receiving groundwater discharge and others recharging groundwater (ARUP Technical Paper 7, 2020).

The stream as a whole is likely to have some reliance on groundwater, particularly where permanent pools of water are observed on aerial imagery. The total volume contributed by groundwater is likely to be a small proportion of the total passing flow. This is consistent with the measured salinity in surface water being an order of magnitude lower than the local groundwater quality.

Badgerys Creek is listed as a moderately sensitive key fish habitat by NSW DPI and provides some level of fish passage. The unnamed tributaries of Badgerys Creek have lower levels of ecosystem sensitivity (unlikely fish habitat).

Thompson Creek

Thompson Creek passes the Aerotropolis core approximately 320 m to the southeast. Thompsons Creek is not mapped as potentially groundwater dependent and is understood to only flow intermittently. This is largely supported by the review of aerial photography which suggests a predominantly dry creek bed. Thompson Creek is not considered to contain an aquatic GDE.



CPB CONTRACTORS

Ghella 1894 5 Generations of Tunnelers

LEGEND

- Proposed VWP

Existing Monitoring Bore
- Bedrock
- Residual
- Residual/Bedrock

Proposed Monitoring Bore
- Alluvium/Bedrock
- Bedrock
- Residual
- Residual/Alluvium
- Residual/Bedrock
- Screened Lithology TBC
- Project Alignment
- Project Alignment Cross Passage
- Project Alignment Structure
- Railway
- Major Road
- Minor Road
- Track
- Path
- Perennial Watercourse
- Non-perennial Watercourse
- Project Alignment Buffer (1 km)

Predicted Groundwater Drawdown
- 1 m
- 2 m
- 5 m
- 10 m

N

0 250 500 m

SCALE 1:15,000
PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE 5-1

Detailed Site Investigation and Baseline Assessment - Groundwater Bore and VWP Locations

Groundwater Monitoring Plan

TETRA TECH COFFEY

SOURCE
Investigation locations, drawdown, and alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Roads, rail, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 17-10-2021).

DATE: 14.04.22 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_F005-1_GIS_REVC

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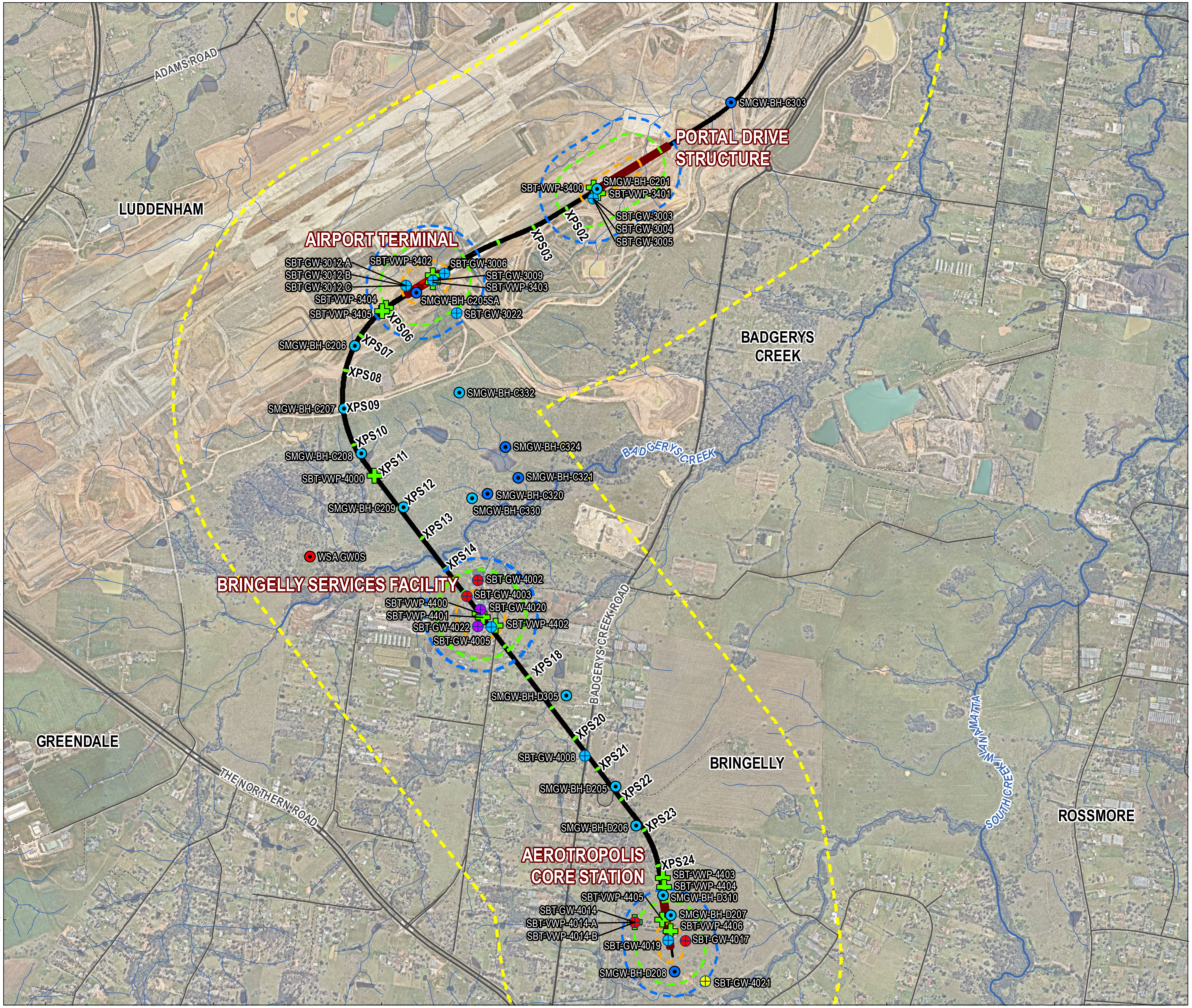


CPB CONTRACTORS

Ghella 1894 5 Generations of Tunnelers

LEGEND

- Proposed VWP
- Existing Monitoring Bore
  - Bedrock
  - Residual/Bedrock
  - Screened Lithology TBC
- Proposed Monitoring Bore
  - Alluvium/Bedrock
  - Bedrock
  - Residual
  - Screened Lithology TBC
- Project Alignment
- Project Alignment Cross Passage
- Project Alignment Structure
- Major Road
- Minor Road
- Track
- Perennial Watercourse
- Non-perennial Watercourse
- Project Alignment Buffer (1 km)
- Predicted Groundwater Drawdown
  - 1 m
  - 2 m
  - 5 m
  - 10 m

SOURCE
Investigation locations, drawdown, and alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Roads and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 17-10-2021).

N
0 250 500 m
SCALE 1:22,500
PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

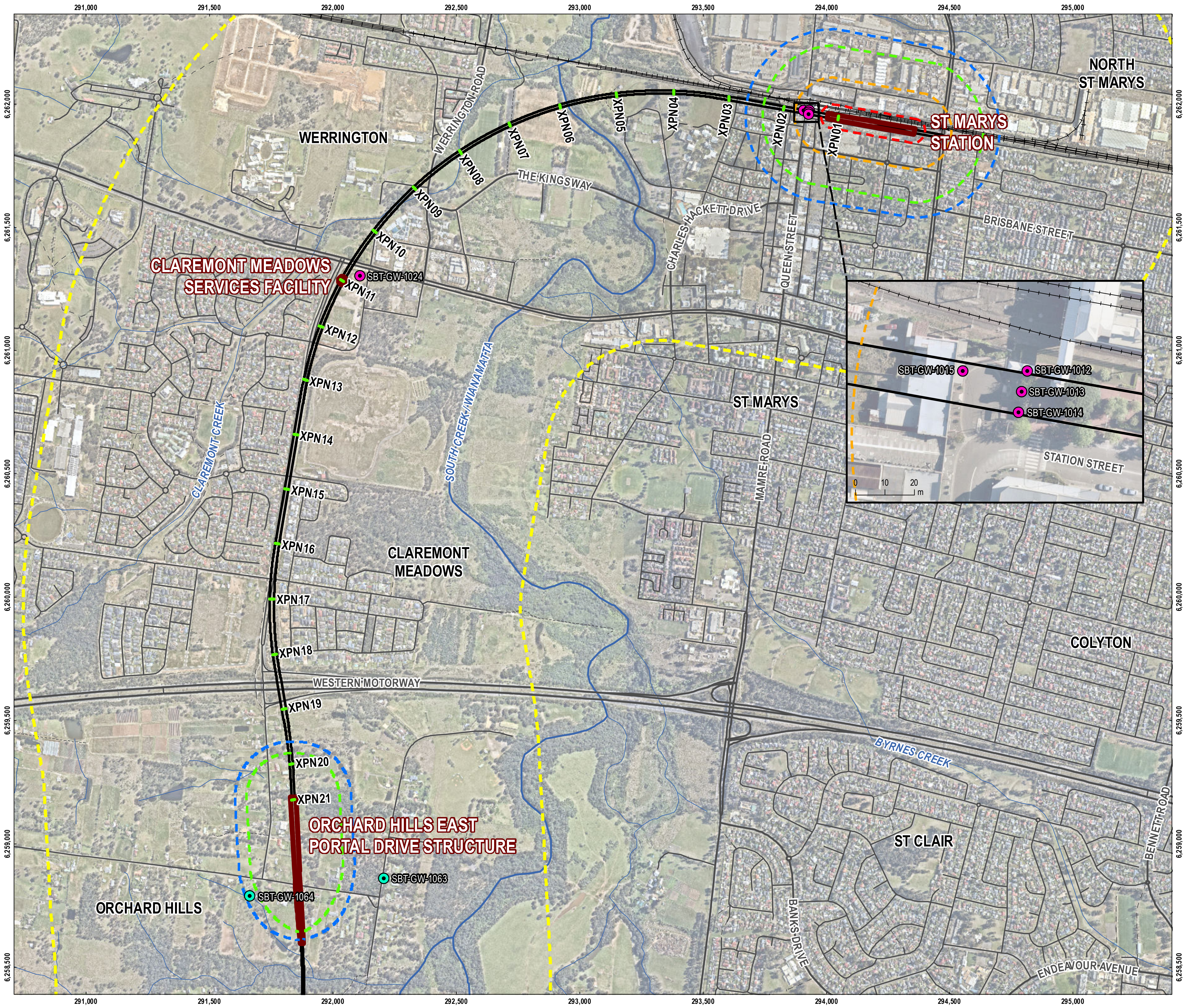
FIGURE 5-2

Detailed Site Investigation and Baseline Assessment - Groundwater Bore and VWP Locations

Groundwater Monitoring Plan

TETRA TECH COFFEY

DATE: 14.04.22 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_F005-2_GIS_REVC



CPB CONTRACTORS

Ghella 1894 5 Generations of Tunnelers

NORTH ST MARYS

LEGEND

Additional Monitoring Location - Potential Impact Monitored

- Contaminant Mobilisation
- GDE Monitoring
- Project Alignment
- Project Alignment Cross Passage
- Project Alignment Structure
- Railway
- Major Road
- Minor Road
- Track
- Path
- Perennial Watercourse
- Non-perennial Watercourse
- Project Alignment Buffer (1 km)

Predicted Groundwater Drawdown

- 1 m
- 2 m
- 5 m
- 10 m

SOURCE
Monitoring locations, drawdown, and alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Roads, rail, and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 17-10-2021).

0 250 500 m

N

SCALE 1:15,000
PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

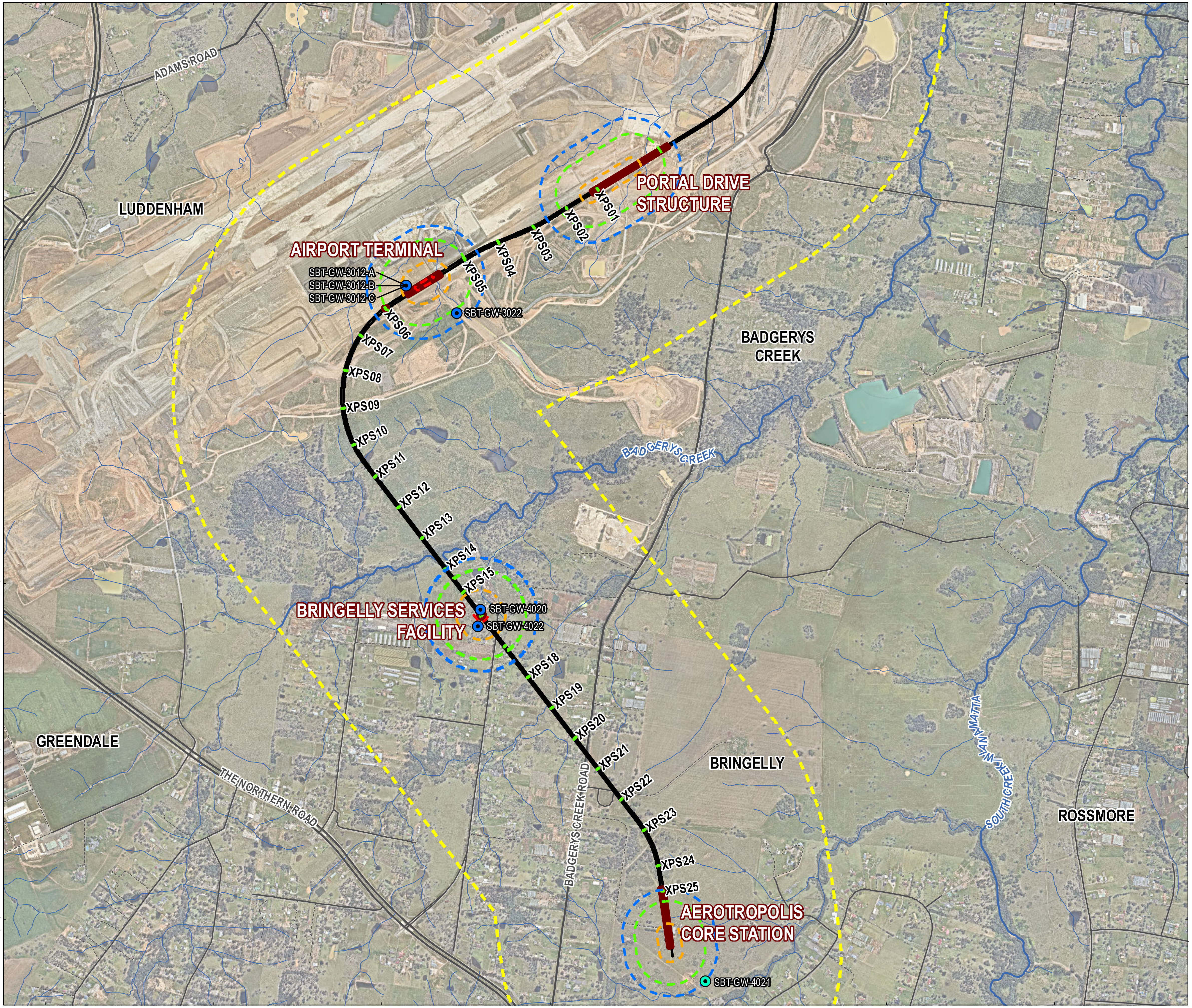
FIGURE 5-3

Additional Locations to Supplement Existing and Proposed Site Investigation Monitoring Network

Groundwater Monitoring Plan

TETRA TECH COFFEY

DATE: 14.04.22 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_F005-3_GIS_REVC



CPB CONTRACTORS

Ghella 1894 5 Generations of Tunnelers

LEGEND

Additional Monitoring Location - Potential Impact Monitored

- GDE Monitoring
- General Water Quality and Level
- Project Alignment
- Project Alignment Cross Passage
- Project Alignment Structure
- Major Road
- Minor Road
- Track
- Perennial Watercourse
- Non-perennial Watercourse
- Project Alignment Buffer (1 km)

Predicted Groundwater Drawdown

- 1 m
- 2 m
- 5 m
- 10 m

SOURCE
Monitoring locations, drawdown, and alignment buffer from Tetra Tech Coffey.
Alignment supplied by CPBG.
Roads and watercourses from DFSI.
Aerial imagery from Nearmap (capture date 17-10-2021).

0 250 500 m

SCALE 1:22,500
PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

CPB - GHELLA

WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

FIGURE 5-4

Additional Locations to Supplement Existing and Proposed Site Investigation Monitoring Network

Groundwater Monitoring Plan

TETRA TECH COFFEY

DATE: 14.04.22 PROJECT: 754-SYDGE292575 FILE: 292575_GMP_F005-4_GIS_REVC

SAVED BY: GREG.HANTON 14.04.22 8:46:51 PM

DOC REFERENCE: C:\USERS\GREG.HANTON\DOCUMENTS\GIS\286919_SYDGE_CPBG_WSASBT\CPBG_WSASBT_GIS\MXD\SYDGE292575_GMP\REVC\292575_GMP_GIS004_REVC.MXD_1

Annexure D Groundwater Quality Data

					>C10 - C16 Fraction minus Naphthalene (F2)(SG)	>C10 - C40 Fraction (sum) (SG)	Aggressivity	Electrical Conductivity (Non Compensated)	ORP	Penconazole*	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	Perfluoropentanesulfonic acid	Post-Perfluorohexadecanoic acid (PFHxDA)	Propane Nitrile (Propionitrile)	Sodium Acifluorfen	Sulphate Reducing Bacteria Population Estimate	Tetradecane	Sum of US EPA PFAS (PFOS + PFOA)*	Tokuthion	Caprolactam	Corexit 9527	Glycidaldehyde	Methyl Mercaptan	Nitrofurantoin	Nitrogen (Organic)	PURGE VOLUME	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	Sum of enHealth PFAS (PFHxS + PFOS + PFOA) TOPA	3-&4-methylphenol	2-(acetylamino) fluorene	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	4-Nitroquinoline-N-oxide	Azobenzene	Bis(2-chloroisopropyl) ether	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl)ether	Dibenzofuran	Hexachloropropene	Methapyrilene	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Phenacetin	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	pH (lab)	Alkalinity (total as CaCO3)
																											mg/L	FAS TOP	Phenol	Semivolatile Organic Compounds																	Physical Parameters			
					mg/L	mg/L	-	µS/cm	CFU/mV	µg/L	µg/L	µg/L	µg/L	mg/kg	mg/L	µg/L	pac/mL	mg/L	µg/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L	mg/L	L	mg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µS/cm	mg/L	pH_unit	mg/L
EQL																														2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	4	2				1
Airport Regulations - Water pollution - accepted limits - fresh water																																																			
ANZG (2018) Freshwater 95% toxicant DGVs																																																			
ANZG (2018) Freshwater 99% toxicant DGVs																																																			
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date_Time																																															
288413	6246761	WSI	WSA GW06	28-Mar-17	-	-	-	15,257	-121.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-17	-	-	-	15,257	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	15-Jun-17	-	-	-	19,379	24	<0.2	-	-	-	0.094	<0.003	<1	-	<0.0001	-	-	-	-	<10	-	<1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	06-Oct-17	-	-	-	23,430	79.8	-	-	-	-	-	<0.003	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	18-Dec-17	-	-	-	23,566	-	-	-	-	-	-	<0.003	-	-	-	-	<0.0005	<0.01	<0.00001	<10	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	19-Dec-17	-	-	-	23,566	90.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	17-Apr-18	-	-	-	17,933	-153.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	18-Apr-18	-	-	-	17,933	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-	-	<2	-	-	-	3.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	03-Jul-18	-	-	-	17,220	-103.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Jul-18	-	-	-	17,220	-	-	-	-	-	-	<0.0001	-	-	-	-	-	-	-	<2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	06-Sep-18	-	-	-	19,013	-	-	-	-	-	-	<0.00005	-	-	-	<0.01	<0.0002	<0.05	<0.00005	<1	<0.5	-	-	3	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	07-Sep-18	-	-	-	19,013	-10.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	12-Dec-18	-	-	-	-	-	-	-	-	-	-	<0.003	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	14-Dec-18	-	-	-	19,106	-36.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-19	-	-	-	19,137	-104.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	28-Mar-17	-	-	-	19,956	-210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	29-Mar-17	-	-	-	19,956	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<10	-	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	15-Jun-17	-	-	-	19,091	-98	<0.2	-	-	-	0.017	-	<1	-	<0.0001	-	-	-	-	-	-	<1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	06-Oct-17	-	-	-	23,350	26.3	-	-	-	-	-	<0.003	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Dec-17	-	-	-	21,986	-	-	-	-	-	-	<0.003	-	-	-	-	<0.0005	<0.01	<0.00001	<10	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	19-Dec-17	-	-	-	21,986	99.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	17-Apr-18	-	-	-	18,099	-70.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Apr-18	-	-	-	18,099	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-	-	<2	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	03-Jul-18	-	-	-	17,677	-51.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Jul-18	-	-	-	17,677	-	-	-	-	-	-	<0.0001	-	-	-	-	-	-	-	<2	-	-	-	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	06-Sep-18	-	-	-	19,869	-	-	-	-	-	-	<0.00005	-	-	-	<0.01	<0.0002	<0.05	<0.00005	<1	<0.5	-	-	2	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	07-Sep-18	-	-	-	19,869	28.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	13-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.002	<0.1	<0.0001	-	<10	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	14-Dec-18	-	-	-	20,419	32.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	05-Apr-19	-	-	-	19,108	48.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	28-Mar-17	-	-	-	15,528	-229	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	29-Mar-17	-	-	-	15,528	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.01	<0.00001	-	<0.1	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	15-Jun-17	-	-	-	14,237	-136	<0.2	-	-	-	0.029	<0.003	<1	-	<0.0001	-	-	-	-	<10	-	<1	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	06-Oct-17	-	-	-	17,290	-26	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.05	<0.00005	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Dec-17	-	-	-	######	-	-	-	-	-	-	<0.003	-	-	-	-	<0.0005	<0.01	<0.00001	<10	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	19-Dec-17	-	-	-	21,128	-10.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	17-Apr-18	-	-	-	15,224	-127.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Apr-18	-	-	-	15,224	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-	-	<2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	03-Jul-18	-	-	-	14,372	-127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Jul-18	-	-	-	14,372	-	-	-	-	-	-	<0.0001	-	-	-	-	-	-	-	<2	-	-	-	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	06-Sep-18	-	-	-	15,029	-	-	-	-	-	-	<0.00005	-	-	-	<0.01	-	-	-	<1	-	-	-	2.8	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	07-Sep-18	-	-	-	15,029	-65.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	12-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	14-Dec-18	-	-	-	14,966	-87.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	05-Apr-19	-	-	-	15,460	-165.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288838	6247416	WSI	SMGW-BH-C206	08-Sep-20	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	<4	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	23,900	-	7.6	1030
288852	6246085	WSI	SMGW-BH-C002	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	1400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	826	-	9.31	204
288852	6246085	WSI	SMGW-BH-C002	06-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	27
288878	6246774	WSI	SMGW-BH-C208	17-May-21	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	21,900	-	7.6	87
288970	6246102	WSI	SMGW-BH-C001S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	6000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4440	-	7.85	264
288970	6246102	WSI	SMGW-BH-C001S	06-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	703
289013	6246245	WSI	WSA GW08	28-Mar-17	-	-	-	20,820	-297.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	29-Mar-17	-	-	-	20,820	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	15-Jun-17	-	-	-	18,332	-305	<0.2	-	-	-	<0.005	<0.003	<1	-	<0.0001	-	<0.004	<0.01	<0.00001	<10	<0.1	<1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	05-Oct-17	-	-	-	22,070	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.05	<0.00005	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	06-Oct-17	-	-	-	22,070	-312	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Dec-17	-	-	-	13,603	-	-	-	-	-	-	<0.003	-	-	-	-	<0.0005	<0.01	<0.00001	<10	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	19-Dec-17	-	-	-	13,603	-328.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	17-Apr-18	-	-	-	20,497	-337.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Apr-18	-	-	-	20,497	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-	-	<2	-	-	-	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	03-Jul-18	-	-	-	17,981	-331.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Jul-18	-	-	-	17,981	-	-	-	-	-	-	<0.0001	-	-	-	-	-	-	-	<2	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	06-Sep-18	-	-	-	18,230	-	-	-	-	-	-	<0.00005	-	-	-	<0.01	-	-	-	<1	-	-	-	2.6	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	07-Sep-18	-	-	-	18,230	-281.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	13-Dec-18	-	-	-	-	-	-	-	-	-	-	<0.003	-	-	-	<0.01	-	-	-	<10	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

					>C10 - C16 Fraction minus Naphthalene (F2)(SG)	>C10 - C40 Fraction (sum)(SG)	Aggressivity	Electrical Conductivity (Non Compensated)	ORP	Penconazole*	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	Perfluoropentanesulfonic acid	Post-Perfluorohexadecanoic acid (PFHxDA)	Propane Nitrile (Propionitrile)	Sodium Acifluorfen	Sulphate Reducing Bacteria Population Estimate	Tetradecane	Sum of US EPA PFAS (PFOS + PFOA)*	Tokuthion	Caprolactam	Corexit 9527	Glycidaldehyde	Methyl Mercaptan	Nitrofurantoin	Nitrogen (Organic)	PURGE VOLUME	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	Sum of enHealth PFAS (PFHxS + PFOS + PFOA) TOPA	3-&4-methylphenol	2-(acetylamino) fluorene	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	4-Nitroquinoline-N-oxide	Azobenzene	Bis(2-chloroisopropyl) ether	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl)ether	Dibenzofuran	Hexachloropropene	Methapyrilene	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Phenacetin	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	pH (lab)	Alkalinity (total as CaCO3)
																												mg/L	FAS TOP	Phenol	Semivolatile Organic Compounds																	Physical Parameters			
					mg/L	mg/L	-	µS/cm	CFU/mV	µg/L	µg/L	µg/L	µg/L	mg/kg	mg/L	µg/L	pac/mL	mg/L	µg/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L	mg/L	L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µS/cm	mg/L	pH_unit	mg/L
EQL																														2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	4	2				1
Airport Regulations - Water pollution - accepted limits - fresh water																																																			
ANZG (2018) Freshwater 95% toxicant DGVs																																																			
ANZG (2018) Freshwater 99% toxicant DGVs																																																			
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date_Time																																															
289013	6246245	WSI	WSA GW08	14-Dec-18	-	-	-	18,959	-316.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	05-Apr-19	-	-	-	19,058	-334.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	07-Oct-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,100	-	7.64	854
289128	6246455	WSI	SMGW-BH-C209	02-Dec-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,000	-	7.56	907
289220	6247060	WSI	SMGW-BH-C331	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
289414	6246914	WSI	SMGW-BH-C325	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0558	-	-	-	-	-	-	-	-	<0.00005	0.0678	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5800	-	7.3	730
289595	6246615	WSI	SMGW-BH-C322	13-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29,000	-	7.1	380
289595	6246615	WSI	SMGW-BH-C322	13-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0004	-	-	-	-	-	-	-	-	0.00000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29,000	-	6.6	-
289595	6246615	WSI	SMGW-BH-C322	13-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29,000	-	7.2	320
289599	6245794	Bringelly	SMGW-BH-D303S	18-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26,000	-	7.6	990
289599	6245794	Bringelly	SMGW-BH-D303S	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32,000	-	7.5	1000
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31,000	-	7.6	1200
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30,000	-	7	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30,000	-	7.8	1200
289601	6245801	Bringelly	SMGW-BH-D303	17-Feb-21	-	-	-	-	-	-	<0.0001	<0.01	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21,000	14,000	7.6	760
289601	6245801	Bringelly	SMGW-BH-D303	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27,000	17,000	7.7	920
289601	6245801	Bringelly	SMGW-BH-D303	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	7.8	1100
289629	6246535	WSI	SMGW-BH-C320	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	7.8	870
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0036	-	-	-	-	-	-	-	-	<0.00005	0.0076	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6600	-	8	970
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0047	-	-	-	-	-	-	-	-	0.00000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6000	-	7.2	920
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0037	-	-	-	-	-	-	-	-	<0.00005	0.0077	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6400	-	8.1	960
289809	6246630	WSI	SMGW-BH-C321	13-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0035	-	-	-	-	-	-	-	-	<0.00005	0.0075	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6100	-	7.9	1100
290097	6245334	Bringelly	SMGW-BH-D305	15-Feb-21	-	-	-	-	-	-	0.0002	<0.01	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22,000	15,000	8.1	710
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1100
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30,000	-	7.8	1200
290274	6248345	WSI	SMGW-BH-C201S	27-Aug-20	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	<4	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	26,700	-	7.49	1070
290279	6248348	WSI	SMGW-BH-C201	03-Sep-20	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	<4	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	24,700	-	7.59	868
290304	6247361	WSI	SMGW-BH-C351	21-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
290390	6244794	Southern Tunnels	SMGW-BH-D205	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,700	-	7.72	872
290390	6244794	Southern Tunnels	SMGW-BH-D205	17-Feb-21	-	-	1	-	-	-	-	-	-	-	-	-	1400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18,600	-	-	850
290390	6244794	Southern Tunnels	SMGW-BH-D205	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19,400	-	7.58	987
290461	6247764	WSI	WSA GW16	28-Mar-17	-	-	-	17,332	-271.7	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.01	<0.00001	-	<0.1	-	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	14-Jun-17	-	-	-	20,633	-	<0.2	-	-	-	0.13	<0.003	16	-	0.0001	-	-	-	-	<10	-	12	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	15-Jun-17	-	-	-	20,633	-147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Oct-17	-	-	-	23,790	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	06-Oct-17	-	-	-	23,790	-151.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	17-Apr-18	-	-	-	18,652	41.2	-	-	-	-	-	<0.0005	-	-	-	-	-	-	-	<2	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	03-Jul-18	-	-	-	23,086	-106.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Jul-18	-	-	-	23,086	-	-	-	-	-	-	<0.003	-	-	-	-	-	-	-	<10	-	-	-	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	07-Sep-18	-	-	-	-	-	-	-	-	-	-	<0.00005	-	-	-	<0.01	<0.002	<0.1	<0.0001	<1	<10	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	12-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.1	<0.0001	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Apr-19	-	-	-	22,380	-5.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290513	6244560	Southern Tunnels	SMGW-BH-D206	17-May-21	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	27,200	-	7.41	827
290677	6244060	Aerotropolis	SMGW-BH-D322	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	0.00000	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
290695	6243992	Aerotropolis	SMGW-BH-D324	22-Feb-21	-	-	-	-	-	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	0.00000	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,000	12,000	7.7	1200
290695	6243992	Aerotropolis	SMGW-BH-D324	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290704	6243892	Aerotropolis	SMGW-BH-D326	18-Feb-21	-	-	-	-	-	-	<0.0001	<0.01	<0.001	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,000	7600	8	1000
290704	6243892	Aerotropolis	SMGW-BH-D326	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243914	Aerotropolis	SMGW-BH-D308	18-Feb-21	-	-	-	-	-	-	0.0002	<0.01	<0.001	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8500	5500	8.2	740
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,100	-	7.28	830
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,300	-	7.47	789
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,800	-	7.69	780
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15,800	-	7.73	941
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,700	-	7.66	994
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,100	-	7.59	803
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,600	-	7.67	994
290716	6243821	Aerotropolis	SMGW-BH-D109S	11-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,900	-	7.68	1260
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,000	-	7.88	1290
290716	6243821	Aerotropolis	SMGW-BH-D109S	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,100	-	7.45	1300
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23,600	-	7.65	1350
290716	6243821	Aerotropolis	SMGW-BH-D109S	01-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22,600	-	7.64	1350
290716	6243821	Aerotropolis	SMGW-BH-D109S	23-Feb-21	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	01-Sep-20	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	<4	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	11,000	-	7.87	924
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,600	-	7.61	1030

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date_Time	>C10 - C16 Fraction minus Naphthalene (F2)(SG)	>C10 - C40 Fraction (sum) (SG)	Aggressivity	Electrical Conductivity (Non Compensated)	ORP	Penconazole*	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	Perfluoropentanesulfonic acid	Post-Perfluorohexadecanoic acid (PFHxDA)	Propane Nitrile (Propionitrile)	Sodium Acifluorfen	Sulphate Reducing Bacteria Population Estimate	Tetradecane	Sum of US EPA PFAS (PFOS + PFOA)*	Tokuthion	Caprolactam	Corexit 9527	Glycidaldehyde	Methyl Mercaptan	Nitrofurantoin	Nitrogen (Organic)	PURGE VOLUME	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	Sum of enHealth PFAS (PFHxS + PFOS + PFOA) TOPA	3-&4-methylphenol	2-(acetylamino) fluorene	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	4-Nitroquinoline-N-oxide	Azobenzene	Bis(2-chloroisopropyl) ether	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl)ether	Dibenzofuran	Hexachloropropene	Methapyrilene	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Phenacetin	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	pH (lab)	Alkalinity (total as CaCO3)
																												mg/L	PFAS TOP	Phenol	Semivolatile Organic Compounds																	Physical Parameters			
					mg/L	mg/L	-	µS/cm	CFU/mV	µg/L	µg/L	µg/L	µg/L	mg/kg	mg/L	µg/L	pac/mL	mg/L	µg/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L	mg/L	L	mg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µS/cm	mg/L	pH_unit	mg/L
EQL																														2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	4	2				1
Airport Regulations - Water pollution - accepted limits - fresh water																																																			
ANZG (2018) Freshwater 95% toxicant DGVs																																																			
ANZG (2018) Freshwater 99% toxicant DGVs																																																			
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,800	-	7.63	951
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,600	-	7.66	1040
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,900	-	7.75	953
290720	6243765	Aerotropolis	SMGW-BH-D329	18-Feb-21	-	-	-	-	-	-	<0.0001	<0.01	<0.001	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,000	12,000	7.6	1000
290720	6243765	Aerotropolis	SMGW-BH-D329	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	0.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290742	6243691	Aerotropolis	SMGW-BH-D208	17-May-21	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	11,000	-	7.65	643
290762	6248715	WSI	SMGW-BH-C305	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32,000	-	7.3	1000
290762	6248715	WSI	SMGW-BH-C305	12-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30,000	-	7.6	1100
290945	6248669	WSI	SMGW-BH-C304	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,000	-	8.2	1400
290964	6253779	Luddenham Road	SMGW-BH-B120	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25,000	-	7.83	926
290964	6253779	Luddenham Road	SMGW-BH-B120	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18,600	-	7.38	537
291041	6254012	Luddenham Road	SMGW-BH-B320	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	0.00000	<0.001	<6	-	<5	<2	<2	<2	-	-	<2	<2	-	<2	-	-	-	<2	-	-	-	-	-	240
291173	6254264	Luddenham Road	SMGW-BH-B319	02-Mar-21	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	<4	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	28,300	-	7.5	235
291173	6254264	Luddenham Road	SMGW-BH-B319	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	325	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26,300	-	6.7	215
291265	6247780	WSI	WSA GW23	28-Mar-17	-	-	-	19,992	-142.5	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.01	<0.00001	-	<0.1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	04-Oct-17	-	-	-	18,030	-	-	-	-	-	-	<0.003	-	-	-	-	<0.0005	<0.05	<0.00005	<10	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	06-Oct-17	-	-	-	18,030	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Dec-17	-	-	-	21,469	17.7	-	-	-	-	-	<0.003	-	-	-	-	<0.0005	<0.01	<0.00001	<10	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	17-Apr-18	-	-	-	17,677	-5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Apr-18	-	-	-	17,677	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-	-	<2	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Jul-18	-	-	-	15,809	23	-	-	-	-	-	<0.0001	-	-	-	-	-	-	-	<2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	05-Sep-18	-	-	-	16,379	-	-	-	-	-	-	<0.00005	-	-	-	<0.01	-	-	-	<1	-	-	-	4.1	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	07-Sep-18	-	-	-	16,379	58.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	13-Dec-18	-	-	-	-	-	-	-	-	-	-	<0.003	-	-	-	<0.01	<0.002	<0.1	<0.0001	<10	<10	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	14-Dec-18	-	-	-	17,017	60.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	<0.2	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	05-Apr-19	-	-	-	16,430	-25.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26,000	-	7.3	840
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26,000	-	6.9	880
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31,000	-	7.1	850
291326	6249157	WSI	SMGW-BH-C302	12-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30,000	-	7.8	1100
291326	6249157	WSI	SMGW-BH-C302	12-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-	-	-	-	-	-	-	-	0.00000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28,000	-	7.1	-
291326	6249157	WSI	SMGW-BH-C302	12-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31,000	-	7.3	1100
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0121	<0.001	-	-	-	-	-	-	-	<0.00005	0.0311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,000	-	6.5	300
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.012	-	-	-	-	-	-	-	-	0.00000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,000	-	6.2	310
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.016	<0.001	-	-	-	-	-	-	-	<0.00005	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,000	-	6.7	330
291351	6247890	WSI	SMGW-BH-C343	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	990
291370	6249349	WSI	SMGW-BH-C301	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	<0.00005	0.0024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18,000	-	7.5	770
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,800	-	7.55	769
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23,900	-	7.55	1080
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24,600	-	7.78	1150
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	-	-	1	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,200	-	-	658
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24,100	-	7.78	1120
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19,800	-	7.48	1120
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,400	-	-	774
291504	6255514	Luddenham Road	SMGW-BH-B313	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	<0.00005	<0.001	<6	-	<5	<5	<5	<5	-	-	<5	<5	-	<5	-	-	-	<5	-	-	32,000	-	7.1	120
291542	6248270	WSI	SMGW-BH-C340	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	380
291562	6255942	Luddenham Road	SMGW-BH-B312	12-Feb-21	-	-	-	-	-	-	0.0002	<0.01	<0.001	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21,000	13,000	7.1	980
291562	6255942	Luddenham Road	SMGW-BH-B312	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18,800	-	7.71	1250
291572	6256049	Luddenham Road	SMGW-BH-B109	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,100	-	7.93	862
291572	6256049	Luddenham Road	SMGW-BH-B109	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,500	-	7.71	1260
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	6000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,700	-	6.44	264
291703	6256950	Luddenham Road	SMGW-BH-B106	31-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19,800	-	6.59	286
291703	6256950	Luddenham Road	SMGW-BH-B106	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,300	-	6.96	231
291703	6256950	Luddenham Road	SMGW-BH-B106	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21,100	-	6.55	252
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21,000	-	5.4	<20
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0021	-	-	-	-	-	-	-	-	0.00000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	19
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21,000	-	5.3	22
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	607
291728	6258996	Orchard Hills	SMGW-BH-A017	18-Dec-19	-	-	-	23,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	494
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Jan-20	-	-	-	23,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	565
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Apr-20	-	-	-	1580	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92
291728	6258996	Orchard Hills	SMGW-BH-A017	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1760	-	7.11	88
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	607
291737	6259192	Orchard Hills	SMGW-BH-A310	21-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29,000	-	8	390

					>C10 - C16 Fraction minus Naphthalene (F2)(SG)	>C10 - C40 Fraction (sum)(SG)	Aggressivity	Electrical Conductivity (Non Compensated)	ORP	Penconazole*	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	Perfluoropentanesulfonic acid	Post-Perfluorohexadecanoic acid (PFHxDA)	Propane Nitrile (Propionitrile)	Sodium Acifluorfen	Sulphate Reducing Bacteria Population Estimate	Tetradecane	Sum of US EPA PFAS (PFOS + PFOA)*	Tokuthion	Caprolactam	Corexit 9527	Glycidaldehyde	Methyl Mercaptan	Nitrofurantoin	Nitrogen (Organic)	PURGE VOLUME	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	Sum of enHealth PFAS (PFHxS + PFOS + PFOA) TOPA	3-&4-methylphenol	2-(acetylamino) fluorene	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	4-Nitroquinoline-N-oxide	Azobenzene	Bis(2-chloroisopropyl) ether	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl)ether	Dibenzofuran	Hexachloropropene	Methapyrilene	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Phenacetin	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	pH (lab)	Alkalinity (total as CaCO3)
																												mg/L	FAS TOP	Phenol	Semivolatile Organic Compounds																	Physical Parameters			
					mg/L	mg/L	-	µS/cm	CFU/mV	µg/L	µg/L	µg/L	µg/L	mg/kg	mg/L	µg/L	pac/mL	mg/L	µg/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L	mg/L	L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µS/cm	mg/L	pH_unit	mg/L
EQL																														2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	4	2				1
Airport Regulations - Water pollution - accepted limits - fresh water																																																			
ANZG (2018) Freshwater 95% toxicant DGVs																																																			
ANZG (2018) Freshwater 99% toxicant DGVs																																																			
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date_Time																																															
291737	6259191	Orchard Hills	SMGW-BH-A310S	26-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	5	<20
291738	6248976	WSI	WSA GW19	28-Mar-17	-	-	-	23,870	-86	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<10	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	14-Jun-17	-	-	-	34,137	-	<0.2	-	-	-	0.13	-	3	-	<0.0001	-	-	-	-	-	-	2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	15-Jun-17	-	-	-	34,137	-68.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	04-Oct-17	-	-	-	36,770	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.05	<0.00005	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	06-Oct-17	-	-	-	36,770	148	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	17-Apr-18	-	-	-	33,709	71.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	19-Apr-18	-	-	-	33,709	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-	-	<2	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	03-Jul-18	-	-	-	31,571	107.5	-	-	-	-	-	<0.0001	-	-	-	-	-	-	-	<2	-	-	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	07-Sep-18	-	-	-	34,701	61.5	-	-	-	-	-	<0.00005	-	-	-	<0.01	<0.002	<0.1	<0.0001	<1	<10	-	-	1.6	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-
291738	6248976	WSI	WSA GW19	14-Dec-18	-	-	-	26,689	95.2	0.3	-	-	-	0.14	-	1	-	<0.0001	<0.01	<0.001	<0.01	<0.00001	-	<0.01	<1	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-
291738	6259051	Orchard Hills	SMGW-BH-A311	11-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24,000	-	7.1	120
291769	6260026	Northern Tunnels	SMGW-BH-A123	28-May-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22,000	-	7.45	789
291769	6260026	Northern Tunnels	SMGW-BH-A123	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19,400	-	7.11	872
291769	6260026	Northern Tunnels	SMGW-BH-A123	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21,300	-	7.51	822
291769	6260026	Northern Tunnels	SMGW-BH-A123	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18,900	-	7.53	830
291769	6260026	Northern Tunnels	SMGW-BH-A123	17-Feb-21	-	-	1	-	-	-	-	-	-	-	-	-	3300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22,000	-	7.55	962
291786	6259594	Orchard Hills	SMGW-BH-A113	27-May-20	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	<4	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	25,700	-	7.39	678
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,100	-	7.35	649
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23,800	-	7.62	816
291786	6259594	Orchard Hills	SMGW-BH-A113	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,900	-	7.5	746
291786	6259594	Orchard Hills	SMGW-BH-A113	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25,500	-	7.51	734
291786	6259594	Orchard Hills	SMGW-BH-A113	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24,100	-	7.5	754
291836	6257203	Luddenham Road	SMGW-BH-B309	02-Mar-21	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	73
291848	6248251	WSI	SMGW-BH-C341	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160
291855	6258838	Orchard Hills	SMGW-BH-A117	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32,700	-	6.58	147
291855	6258838	Orchard Hills	SMGW-BH-A117	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	6000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28,800	-	5.78	65
291855	6258838	Orchard Hills	SMGW-BH-A117	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	6000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,900	-	6.34	132
291855	6258838	Orchard Hills	SMGW-BH-A117	17-Feb-21	-	-	1	-	-	-	-	-	-	-	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32,400	-	6.01	59
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-May-20	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31,900	-	5.2	7
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26,200	-	4.92	5
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30,100	-	5.11	6
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	4.95	3
291857	6258838	Orchard Hills	SMGW-BH-A117S	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28,600	-	5.44	9
291893	6260308	Northern Tunnels	SMGW-BH-A122	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15,900	-	12	1250
291893	6260308	Northern Tunnels	SMGW-BH-A122	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19,000	-	12.2	1540
291893	6260308	Northern Tunnels	SMGW-BH-A122	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,100	-	11.6	437
291893	6260308	Northern Tunnels	SMGW-BH-A122	17-Feb-21	-	-	1	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29,100	-	10.9	128
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,700	-	7.57	520
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24,400	-	7.6	541
291915	6260719	Northern Tunnels	SMGW-BH-A111	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,800	-	7.85	558
291915	6260719	Northern Tunnels	SMGW-BH-A111	17-Feb-21	-	-	1	-	-	-	-	-	-	-	-	-	1400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26,700	-	7.6	585
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23,700	-	7.42	791
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7730	-	7.7	270
291944	6260883	Northern Tunnels	SMGW-BH-A121	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6240	-	7.89	339
291944	6260883	Northern Tunnels	SMGW-BH-A121	17-Feb-21	-	-	1	-	-	-	-	-	-	-	-	-	1400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4200	-	7.36	197
291953	6260516	Northern Tunnels	SMGW-BH-A019	06-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	2490
292033	6257200	Luddenham Road	SMGW-BH-B308	02-Mar-21	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	159
292037	6261297	Claremont Meadow	SMGW-BH-A109S	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	325	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1120	-	8.51	87
292037	6261297	Claremont Meadow	SMGW-BH-A109S	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	1400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1070	-	8	180
292037	6261297	Claremont Meadow	SMGW-BH-A109S	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	1400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1420	-	7.77	276
292037	6261297	Claremont Meadow	SMGW-BH-A109S	17-Feb-21	-	-	1	-	-	-	-	-	-	-	-	-	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	876	-	7.61	210
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	-	-	-	-	-	-	<0.0001	<0.01	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	<0.00005	<0.001	<6	-	<5	<5	<5	<5	-	-	<5	<5	-	<5	-	-	-	<5	-	-	16,000	9400	7.5	650
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,200	-	7.48	713
292038	6261300	Claremont Meadow	SMGW-BH-A109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,400	-	7.49	720
292038	6261300	Claremont Meadow	SMGW-BH-A109	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,900	-	7.51	701
292038	6261300	Claremont Meadow	SMGW-BH-A109	17-Feb-21	-	-	1	-	-	-	-	-	-	-	-	-	6000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,600	-	7.57	687
292130	6249000	WSI	WSA GW20	28-Mar-17	-	-	-	6306	-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Jun-17	-	-	-	4380	-	<0.2	-	-	-	0.025	<0.003	<1	-	<0.0001	-	<0.004	<0.01	<0.00001	<10	<0.1	14	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	15-Jun-17	-	-	-	4380	63.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	04-Oct-17	-	-	-	7397	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	06-Oct-17	-	-	-	7397	193.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	19-Dec-17	-	-	-	9930.8	89.1	-	-	-	-	-	<0.003	-	-	-	-	<0.0005	<0.01	<0.00001	<10	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	17-Apr-18	-	-	-	11,665	-76.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	18-Apr-18	-	-	-	11,665	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-	-	<2	-	-	-	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

																											mg/L	FAS TOP	Phenol	Semivolatile Organic Compounds																		Physical Parameters			
					>C10 - C16 Fraction minus Naphthalene (F2)(SG)	>C10 - C40 Fraction (sum) (SG)	Aggressivity	Electrical Conductivity (Non Compensated)	ORP	Penconazole*	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	Perfluoropentanesulfonic acid	Post-Perfluorohexadecanoic acid (PFHxDA)	Propane Nitrile (Propionitrile)	Sodium Acifluorfen	Sulphate Reducing Bacteria Population Estimate	Tetradecane	Sum of US EPA PFAS (PFOS + PFOA)*	Tokuthion	Caprolactam	Corexit 9527	Glycidaldehyde	Methyl Mercaptan	Nitrofurantoin	Nitrogen (Organic)	PURGE VOLUME	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol	Sum of enHealth PFAS (PFHxS + PFOS + PFOA) TOPA	3-&4-methylphenol	2-(acetylamino) fluorene	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	4-Nitroquinoline-N-oxide	Azobenzene	Bis(2-chloroisopropyl) ether	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl)ether	Dibenzofuran	Hexachloropropene	Methapyrilene	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Phenacetin	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	pH (lab)	Alkalinity (total as CaCO3)
					mg/L	mg/L	-	µS/cm	CFU/mV	µg/L	µg/L	µg/L	µg/L	mg/kg	mg/L	µg/L	pac/mL	mg/L	µg/L	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L	mg/L	L	mg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µS/cm	mg/L	pH_unit	mg/L
EQL																														2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	4	2				1
Airport Regulations - Water pollution - accepted limits - fresh water																																																			
ANZG (2018) Freshwater 95% toxicant DGVs																																																			
ANZG (2018) Freshwater 99% toxicant DGVs																																																			
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	**y_coord**	**Monitoring_Zone**	**Location_Code**	**Sampled_Date_Time**																																															
292130	6249000	WSI	WSA GW20	03-Jul-18	-	-	-	11,630	48.3	-	-	-	-	-	<0.0001	-	-	-	-	-	-	-	<2	-	-	-	4.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	05-Sep-18	-	-	-	14,009	-	-	-	-	-	-	<0.00005	-	-	-	<0.01	-	-	-	<1	-	-	-	2.8	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	07-Sep-18	-	-	-	14,009	32.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Dec-18	-	-	-	15,162	-49.4	<0.2	-	-	-	0.033	-	2	-	<0.0001	<0.01	-	-	-	-	-	<1	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.001	-	-	-	-	-	<0.2	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	05-Apr-19	-	-	-	14,310	-150.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	28-Mar-17	-	-	-	21,997	26	-	-	-	-	-	<0.001	-	-	-	-	<0.0001	<0.01	<0.00001	<10	<0.1	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Jun-17	-	-	-	17,015	-	<0.2	-	-	-	0.1	-	3	-	<0.0001	-	-	-	-	-	-	14	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	15-Jun-17	-	-	-	17,015	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	04-Oct-17	-	-	-	18,759	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	06-Oct-17	-	-	-	18,759	20.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	19-Dec-17	-	-	-	24,297	-12.4	-	-	-	-	-	<0.003	-	-	-	-	<0.0005	<0.01	<0.00001	<10	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	21-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	17-Apr-18	-	-	-	24,172	-84.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	18-Apr-18	-	-	-	24,172	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-	-	<2	-	-	-	8.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Jul-18	-	-	-	21,380	2.5	-	-	-	-	-	<0.0001	-	-	-	-	-	-	-	<2	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	05-Sep-18	-	-	-	21,682	-	-	-	-	-	-	<0.00005	-	-	-	<0.01	-	-	-	<1	-	-	-	3.7	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	07-Sep-18	-	-	-	21,682	21.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Dec-18	-	-	-	24,128	-2.9	<0.2	-	-	-	0.03	-	2	-	<0.0001	<0.01	-	-	-	-	-	<1	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	05-Apr-19	-	-	-	22,590	-64.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,700	-	7.47	659
292413	6261713	Northern Tunnels	SMGW-BH-A107	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,000	-	7.14	658
292413	6261713	Northern Tunnels	SMGW-BH-A107	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15,000	-	7.38	678
292413	6261713	Northern Tunnels	SMGW-BH-A107	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	6000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18,200	-	7.42	593
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-May-20	-	-	-	-	-	-	-	-	-	-	-	-	6000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,600	-	7.57	502
292413	6261713	Northern Tunnels	SMGW-BH-A107S	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	1400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,700	-	7.1	443
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	6000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,200	-	7.66	450
292413	6261713	Northern Tunnels	SMGW-BH-A107S	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	1400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,400	-	7.51	440
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,100	-	7.53	448
292892	6262062	Northern Tunnels	SMGW-BH-A011S	06-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80
292892	6262062	Northern Tunnels	SMGW-BH-A011S	18-Dec-19	-	-	-	2420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	83
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Jan-20	-	-	-	2430	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Apr-20	-	-	-	3450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	101
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2250	-	6.95	98
292892	6262062	Northern Tunnels	SMGW-BH-A011S	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	80
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2230	-	6.98	101
293098	6262002	Northern Tunnels	SMGW-BH-A105	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8220	-	7.23	1240
293098	6262002	Northern Tunnels	SMGW-BH-A105	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7340	-	6.76	1150
293098	6262002	Northern Tunnels	SMGW-BH-A105	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7350	-	7.09	1170
293098	6262002	Northern Tunnels	SMGW-BH-A105	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8500	-	7.06	1240
293100	6261999	Northern Tunnels	SMGW-BH-A105S	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2550	-	7.43	302
293100	6261999	Northern Tunnels	SMGW-BH-A105S	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2240	-	6.99	279
293100	6261999	Northern Tunnels	SMGW-BH-A105S	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2140	-	6.93	246
293937	6261970	St Marys	SMGW-BH-A202	02-Dec-20	-	-	-	-	-	-	-	-	-	-	-	-	6000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	615	-	7.3	103
293937	6261970	St Marys	SMGW-BH-A202	02-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4370	-	7.49	123
293937	6261970	St Marys	SMGW-BH-A202	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1330	-	8.51	144
293999	6261951	St Marys	SMGW-BH-A302	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0012	-	-	-	-	-	-	-	-	0.00000	0.0012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Feb-21	-	-	-	-	-	-	<0.001	<0.001	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	0.00000	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	06-Mar-20	-	-	-	13,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	223
294051	6261946	St Marys	SMGW-BH-A102	05-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,200	-	6.55	274
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,900	-	6.19	173
294051	6261946	St Marys	SMGW-BH-A102	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,800	-	6.33	88
294051	6261946	St Marys	SMGW-BH-A102	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,300	-	6.48	105
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,900	-	6.24	99
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.013	-	-	-	-	-	-	-	-	0.00000	0.013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.017	-	-	-	-	-	-	-	-	0.00000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0119	-	-	-	-	-	-	-	-	0.00000	0.0119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,600	-	6.26	155
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,600	-	6.37	107
294138	6261944	St Marys	SMGW-BH-A002	18-Dec-19	-	-	-	29,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	547
294138	6261944	St Marys	SMGW-BH-A002	24-Jan-20	-	-	-	23,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	314
294138	6261944	St Marys	SMGW-BH-A002	06-Mar-20	-	-	-	13,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	223
294138	6261944	St Marys	SMGW-BH-A002	20-Apr-20	-	-	-	27,200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	534
294138	6261944	St Marys	SMGW-BH-A002	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,100	-	6.62	60
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	0.00000	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0008	-	-	-	-	-	-	-	-	0.00000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date_Time	>C10 - C16 Fraction minus Naphthalene (F2) (SG) (mg/L)	>C10 - C40 Fraction (sum) (SG) (mg/L)	Aggressivity (-)	Electrical Conductivity (Non Compensated) (µS/cm)	ORP (CFU/mV)	Penconazole* (µg/L)	Perfluorooctanesulfonic acid - PFOS (µg/L)	Perfluorooctanoic acid - PFOA (µg/L)	Perfluoropentanesulfonic acid (µg/L)	Post-Perfluorohexadecanoic acid (PFHxDA) (mg/kg)	Propane Nitrile (Propionitrile) (mg/L)	Sodium Acifluorfen (µg/L)	Sulphate Reducing Bacteria Population Estimate (pac/mL)	Tetradecane (mg/L)	Sum of US EPA PFAS (PFOS + PFOA)* (µg/L)	Tokuthion (mg/L)	Caprolactam (µg/L)	Corexit 9527 (mg/L)	Glycidaldehyde (µg/L)	Methyl Mercaptan (µg/L)	Nitrofurantoin (µg/L)	Nitrogen (Organic) (mg/L)	PURGE VOLUME (L)
EQL																											
Airport Regulations - Water pollution - accepted limits - fresh water																											
ANZG (2018) Freshwater 95% toxicant DGVs																											
ANZG (2018) Freshwater 99% toxicant DGVs																											
PFAS NEMP 2018 Table 5 Freshwater 99%																											
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	-	-	-	-	-	-	0.0003	<0.01	<0.001	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	-	-	-	-	-	-	0.0019	<0.01	<0.001	-	-	-	-	-	0.0029	<0.002	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	######	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	27,000	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	1	-	-	-	-	-	-	-	-	-	1400	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Location_Code	Sampled_Date_Time	mg/L: 2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (mg/L)	PFAS TOP: Sum of enHealth PFAS (PFHxS + PFOS + PFOA) TOPA (ug/L)	Phenol: 3-&4-methylphenol (µg/L)	Semivolatile Organic Compounds: 2-(acetylamino) fluorene (µg/L)	3,3-Dichlorobenzidine (µg/L)	4-(dimethylamino) azobenzene (µg/L)	4-bromophenyl phenyl ether (µg/L)	4-chlorophenyl phenyl ether (µg/L)	4-Nitroquinoline-N-oxide (µg/L)	Azobenzene (µg/L)	Bis(2-chloroisopropyl) ether (µg/L)	Bis(2-chloroethoxy) methane (µg/L)	Bis(2-chloroethyl)ether (µg/L)	Dibenzofuran (µg/L)	Hexachloropropene (µg/L)	Methapyrilene (µg/L)	N-nitrosomorpholine (µg/L)	N-nitrosopiperidine (µg/L)	N-nitrosopyrrolidine (µg/L)	Phenacetin (µg/L)	Physical Parameters: Electrical Conductivity @ 25C (lab) (µS/cm)	Total Dissolved Solids (TDS) (mg/L)	pH (lab) (pH_unit)	Alkalinity (total as CaCO3) (mg/L)
EQL				2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	4	2				1
Airport Regulations - Water pollution - accepted limits - fresh water																									
ANZG (2018) Freshwater 95% toxicant DGVs																									
ANZG (2018) Freshwater 99% toxicant DGVs																									
PFAS NEMP 2018 Table 5 Freshwater 99%																									
SMGW-BH-A002	22-Apr-21	0.00000	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A002	06-Sep-19	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	408
SMGW-BH-A321	12-Feb-21	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23,000	12,000	7.7	510
SMGW-BH-A321	23-Apr-21	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A321S	18-Feb-21	<0.00005	0.0029	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,000	10,000	7.7	430
SMGW-BH-A321S	23-Apr-21	<0.00005	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,400	-	7.24	715
SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18,000	-	7.14	702
SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15,800	-	7.33	620
SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,200	-	7.3	580
SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,100	-	-	498
SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,400	-	7.61	681

					Alkalinity								Ions											Nutrients									NA	OCP		Amino Aliphatics				Amino Aromatics				Anilines							
					Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hardness	Hardness (Filtered)	Alkalinity (total)	Hydroxide	Hardness as CaCO3	Calcium	Calcium (Filtered)	Chloride	Fluoride	Potassium	Potassium (Filtered)	Sodium	Sodium (Filtered)	Ionic Balance	Anions Total	Cations Total	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)	Phosphate (as P)	Phosphate total (P)	p,p-DDT	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline	Alkalinity (Carbonate as CaCO3)	Alkalinity (Carbonate)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
EQL					1									1	1	0.1		1		1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.01	0.1						2	2	2	2	2			4	4	4	2	2	2	2	1	
Airport Regulations - Water pollution - accepted limits - fresh water																												0.1	.005|0.01																						
ANZG (2018) Freshwater 95% toxicant DGVs																								0.9																									250		
ANZG (2018) Freshwater 99% toxicant DGVs																								0.32																									8		
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
288413	6246761	WSI	WSA GW06	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.2	-	<0.02	<0.02	5.4	-	5.4	-	0.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	-	0.11	<0.02	2	-	1.9	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.1	-	0.02	<0.02	4.2	-	4.2	-	0.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	18-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7	-	-	-	7.8	-	7.8	-	0.13	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.2	-	<0.02	<0.02	8.2	-	6.9	-	0.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.1	-	<0.02	<0.02	7.3	-	7.3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	06-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.4	-	<0.02	<0.02	5.8	-	5.8	-	0.07	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	12-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.7	-	<0.02	<0.02	7.7	-	7.7	-	0.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.8	-	<0.02	<0.02	8.6	-	8.6	-	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.18	-	0.4	<0.02	2.4	-	2	-	0.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	29-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19	-	0.38	<0.02	2.3	-	2	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.12	-	0.05	<0.02	0.3	-	0.3	-	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.11	-	<0.02	<0.02	0.2	-	<0.2	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	-	-	-	0.3	-	0.3	-	0.1	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	<0.02	<0.02	0.2	-	0.2	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05	-	0.18	<0.02	<0.2	-	<0.2	-	0.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	06-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.08	-	<0.02	<0.02	0.3	-	0.3	-	0.08	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	13-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16	-	0.03	<0.02	<0.2	-	<0.2	-	0.34	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	-	2.4	0.05	2.9	-	0.4	-	0.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	29-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.9	-	<0.02	<0.02	5.1	-	5.1	-	0.68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.7	-	0.04	<0.02	5.1	-	5.1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.7	-	0.07	<0.02	5.7	-	5.6	-	0.28	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.1	-	-	-	6.5	-	6.5	-	0.14	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9	-	<0.02	<0.02	5.9	-	5.6	-	0.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.5	-	<0.02	<0.02	5.4	-	5.4	-	0.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	06-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	<0.02	<0.02	4.6	-	4.6	-	0.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	12-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	<0.02	<0.02	7.2	-	7.2	-	0.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	<0.02	<0.02	5.5	-	5.5	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288838	6247416	WSI	SMGW-BH-C206	08-Sep-20	<1	1030	<1	-	-	-	-	3150	-	258	7240	0.2	-	48	-	4240	0.81	245	249	4.5	<0.01	<0.01	<0.01	4.8	-	4.8	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	-	-
288852	6246085	WSI	SMGW-BH-C002	27-Aug-20	<1	126	78	-	-	-	-	26	-	4	147	0.2	-	4	-	159	5.78	8.47	7.55	0.47	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288852	6246085	WSI	SMGW-BH-C002	06-Sep-19	<1	-	-	-	-	-	-	-	-	188	4400	<0.1	-	46	-	2030	5.14	125	113	2.4	<0.01	<0.01	<0.01	2.3	0.05	2.3	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	8	-
288878	6246774	WSI	SMGW-BH-C208	17-May-21	<1	87	<1	-	-	-	-	1460	-	394	6860	<0.1	-	61	-	4120	3.36	196	210	9.97	0.12	0.12	<0.01	10.7	-	10.6	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	-	-
288970	6246102	WSI	SMGW-BH-C001S	27-Aug-20	<1	264	<1	-	-	-	-	376	-	32	1240	0.4	-	2	-	590	11.8	42.1	33.2	0.08	0.26	0.26	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288970	6246102	WSI	SMGW-BH-C001S	06-Sep-19	<1	-	-	-	-	-	-	-	-	149	5880	0.4	-	4	-	2950	4.79	190	173	0.04	<0.01	<0.01	<0.01	0.3	0.11	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-
289013	6246245	WSI	WSA GW08	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	29-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	<0.02	<0.02	2.7	-	2.6	-	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	<0.02	<0.02	2.2	-	2.2	-	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	05-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	<0.2	<0.2	2	-	<2	-	0.1	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	-	-	-	2.6	-	2.6	-	0.13	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	-	<0.02	<0.02	2.4	-	1.9	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	-	<0.02	<0.02	2.3	-	2.3	-	0.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	06-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.5	-	<1	<1	1.5	-	1.5	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	13-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	-	<0.02	<0.02	2.6	-	2.6	-	0.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

					Alkalinity								Ions											Nutrients									NA	OCP		Amino Aliphatics				Amino Aromatics				Anilines							
					Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hardness	Hardness (Filtered)	Alkalinity (total)	Hydroxide	Hardness as CaCO3	Calcium	Calcium (Filtered)	Chloride	Fluoride	Potassium	Potassium (Filtered)	Sodium	Sodium (Filtered)	Ionic Balance	Anions Total	Cations Total	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)	Phosphate (as P)	Phosphate total (P)	p,p-DDT	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline	Alkalinity (Carbonate as CaCO3)	Alkalinity (Carbonate)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
EQL					1									1	1	0.1		1		1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.01	0.1						2	2	2	2	2			4	4	4	2	2	2	2	1	
Airport Regulations - Water pollution - accepted limits - fresh water																												0.1	.005|0.01																						
ANZG (2018) Freshwater 95% toxicant DGVs																								0.9																									250		
ANZG (2018) Freshwater 99% toxicant DGVs																								0.32																									8		
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
289013	6246245	WSI	WSA GW08	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	-	<0.02	<0.02	2.5	-	2.5	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	-	<0.02	<0.02	2.5	-	2.5	-	0.04	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	07-Oct-20	<1	854	<1	-	-	-	-	1220	-	270	5200	0.2	-	40	-	2800	6.28	167	147	6.07	0.16	0.16	<0.01	6.9	-	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	02-Dec-20	-	907	-	-	-	-	-	1090	-	230	4930	0.2	-	36	-	3000	1.46	158	153	5.36	0.07	0.06	0.01	5.3	-	5.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289220	6247060	WSI	SMGW-BH-C331	29-Apr-21	<20	-	<10	-	-	-	-	-	250	-	5500	<0.5	38	-	3500	-	-	-	-	0.36	8.9	8.4	0.57	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289414	6246914	WSI	SMGW-BH-C325	29-Apr-21	<20	-	<10	-	-	-	-	1400	220	-	1200	<0.5	18	-	790	-	-	-	-	7.1	<0.05	<0.02	<0.02	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289595	6246615	WSI	SMGW-BH-C322	13-May-21	<20	-	<10	-	-	-	-	-	160	-	10,000	<0.5	11	-	5100	-	-	-	-	0.21	-	0.07	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289595	6246615	WSI	SMGW-BH-C322	13-May-21	-	-	<5	4700	-	370	<5	-	140	-	11,000	0.3	9.3	-	5000	-	-5.6	-	-	0.17	-	0.015	<0.005	-	-	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289595	6246615	WSI	SMGW-BH-C322	13-May-21	<20	-	<10	-	-	-	-	-	150	-	9900	0.5	9.5	-	4800	-	-	-	-	0.22	-	0.12	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	18-Feb-21	<20	-	<10	-	-	-	-	9100	390	-	14,000	<0.5	47	-	6800	-	-	-	-	0.08	<0.05	<0.02	<0.02	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	15-Mar-21	<20	-	<10	-	-	-	-	-	470	-	7900	<0.5	56	-	7400	-	-	-	-	0.11	<0.05	<0.02	<0.02	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	<20	-	<10	-	-	-	-	7500	300	-	9800	<0.5	35	-	5300	-	-	-	-	0.08	-	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	<5	6500	-	1100	<5	-	260	-	11,000	0.1	35	-	4600	-	-6.8	-	-	0.091	-	<0.005	<0.005	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	<20	-	<10	-	-	-	-	7300	290	-	9500	<0.5	34	-	5100	-	-	-	-	0.07	-	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	17-Feb-21	<20	760	<10	-	-	-	-	-	480	-	8300	1	55	-	5100	-	-	-	-	3.4	<0.05	<0.02	<0.02	2.9	<0.01	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	15-Mar-21	<20	920	<10	-	-	-	-	-	640	-	8700	<0.5	70	-	6600	-	-	-	-	4.4	<0.05	<0.02	<0.02	3.4	0.16	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	05-May-21	<20	-	<10	-	-	-	-	4300	390	-	8200	<0.5	40	-	4300	-	-	-	-	3.4	-	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289629	6246535	WSI	SMGW-BH-C320	29-Apr-21	<20	-	<10	-	-	-	-	4200	280	-	8800	0.6	12	-	5300	-	-	-	-	<0.01	0.26	0.17	0.09	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<20	-	<10	-	-	-	-	680	68	-	1600	<0.5	<5	-	1300	-	-	-	-	0.03	<0.05	<0.02	<0.02	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<5	-	-	-	680	-	-	-	-	61	1400	0.4	-	4.5	-	980	-5	-	-	0.057	-	<0.005	<0.005	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<20	-	<10	-	-	-	-	670	63	-	1500	0.5	<5	-	1300	-	-	-	-	0.03	<0.05	<0.02	<0.02	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	13-May-21	<20	-	<10	-	-	-	-	-	85	-	1500	0.5	<5	-	1100	-	-	-	-	0.03	-	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	15-Feb-21	<20	710	<10	-	-	-	-	4700	280	-	19,000	2.8	34	-	4100	-	-	-	-	0.99	<0.05	-	-	2	0.28	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	<20	-	<10	-	-	-	-	-	270	-	11,000	<0.5	31	-	5200	-	-	-	-	0.23	-	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	<5	5400	-	1100	<5	-	220	-	11,000	0.1	29	-	4500	-	-6.9	-	-	0.88	-	<0.005	<0.005	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	<20	-	<10	-	-	-	-	-	270	-	11,000	<0.5	29	-	5000	-	-	-	-	0.23	-	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290274	6248345	WSI	SMGW-BH-C201S	27-Aug-20	<1	1070	<1	-	-	-	-	5240	-	268	9730	0.2	-	32	-	5010	1.17	316	323	0.18	0.11	0.11	<0.01	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	-	-
290279	6248348	WSI	SMGW-BH-C201	03-Sep-20	<1	868	<1	-	-	-	-	3170	-	369	7870	0.3	-	80	-	3850	1.95	242	233	6.48	0.08	0.08	<0.01	6.5	-	6.4	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	-	-
290304	6247361	WSI	SMGW-BH-C351	21-Apr-21	<20	-	<10	-	-	-	-	-	280	-	8300	<0.5	44	-	4700	-	-	-	-	1.1	<0.05	<0.02	<0.02	-	-	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	27-Nov-20	<1	872	<1	-	-	-	-	2820	-	284	5880	0.2	-	42	-	3300	0.05	201	201	4.23	<0.01	<0.01	<0.01	4.2	-	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	17-Feb-21	<1	850	<1	-	-	-	-	3140	-	311	5520	0.2	-	42	-	3290	2.26	198	207	4.18	0.02	0.02	<0.01	4.3	-	4.3	0.83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	26-May-21	<1	987	<1	-	-	-	-	3850	-	292	6540	0.2	-	41	-	3580	1.07	239	234	3.58	<0.01	<0.01	<0.01	4.5	-	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.9	-	<0.02	<0.02	6.3	-	6.3	-	5.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	-	0.44	0.11	3.3	-	2.8	-	0.76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.6	-	<0.2	<0.2	3.9	-	3.9	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	-	0.04	0.03	2.6	-	2.5	-	0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	-	1.9	0.29	3.7	-	1.5	-	0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	-	0.97	<0.02	3.1	-	2.1	-	0.27	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	12-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	-	0.59	<0.02	4.4	-	3.8	-	0.94	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8	-	0.24	0.07	3.5	-	3.2	-	0.83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290513	6244560	Southern Tunnels	SMGW-BH-D206	17-May-21	<1	827	<1	-	-	-	-	3310	-	370	8980	0.1	-	43	-	4800	0.8	272	276	2.69	<0.01	<0.01	<0.01	2.8	-	2.8	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	-	-
290677	6244060	Aerotropolis	SMGW-BH-D322	15-Mar-21	<20	-	<10	-	-	-	-	-	240	-	3800	<0.5	44	-	3100	-	-	-	-	3.2	<0.05	<0.02	<0.02	-	-	4.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290695	6243992	Aerotropolis	SMGW-BH-D324	22-Feb-21	<20	1200	<10	-	-	-	-	-	240	-	6600	<0.5	40	-	4000	-	-	-	-	1.6	<0.05	<0.02	<0.02	0.9	0.01	0.9	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290695	6243992	Aerotropolis	SMGW-BH-D324	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	<0.05	<0.02	<0.02	3.6	0.55	3.6	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290704	6243892	Aerotropolis	SMGW-BH-D326	18-Feb-21	<20	1000	<10	-	-	-	-	-	230	-	7200	<0.5	49	-	4000	-	-	-	-	3.8	<0.05	<0.02	<0.02	4.5	0.01	4.5	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290704	6243892	Aerotropolis	SMGW-BH-D326	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.9	0.84	0.04	0.8	3.24	-	2.4	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243914	Aerotropolis	SMGW-BH-D308	18-Feb-21	<20	740	<10	-	-	-	-	1000	100	-	2700	<0.5	35	-	2200	-	-	-	-	1.5	1.9	0.08	1.8	4.9	0.02	3	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jun-20	<1	830	<1	-	-	-	-	1280	-	168	4200	0.1	-	32	-	2400	3.61	141	131	3.22	<0.01	<0.01	<0.01	5.6	-	5.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	<1	789	<1	-	-	-	-	1310	-	172	3940	0.2	-	31	-	2400	0.99	134	131	3.25	<0.01	<0.01	<0.01	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Aug-20	<1	780	<1	-	-	-	-	1170	-	194	3910	0.2	-	33	-	2180	4.45	130	119	4.14	0.02	0.02	<0.01	3.6	-	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Nov-20	<1	941	<1	-	-	-	-	1450	-	214	4600	0.1	-	35	-	2570	3.46	152	142	3.36	<0.01	<0.01	<0.01	3.3	-	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	<1	994	<1	-	-	-	-	1540	-	220	4390	0.1	-	35	-	2690	0.73	147	149	3.8	<0.01	<0.01	<0.01	3.4	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	<1	803	<1	-	-	-	-	1270	-	174	4060	0.2	-	32	-	2330	3.64	137	128	3.21	0.02	0.02	<0.01	3.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	<1	994	<1	-	-	-	-	1510	-	217	4380	0.1	-	34	-	2650	0.06	146	146	3.82	<0.01	<0.01	<0.01	3.7	-	3.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	11-Aug-20	<1	1260	<1	-	-	-	-	3760	-	243	6730	0.2	-	35	-	3380	1.98	232	223	0.03	2.01	2	0.01	2.3	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Aug-20	<1	1290	<1	-	-	-	-	3380	-	255	6720	0.2	-	34	-	3060	7.65	235	202	0.38	2.08	2.07	0.01	3.1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	28-Sep-20	<1	1300	<1	-	-	-	-	4140	-	252	7260	0.2	-	36	-	3670	0.94	248	243	0.59	0.06	0.06	<0.01	0.7	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Nov-20	<1	1350	<1	-	-	-	-	4110	-	286	6640	0.1	-	36	-	3460	0.14	233	234	0.6	<0.01	<0.01	<0.01	0.8	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	01-Feb-21	<1	1350	<1	-	-	-	-	4490	-	275	6970	0.1	-	37	-	3830	2.71	244	257	0.99	0.02	0.02	<0.01	1.3	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	01-Sep-20	<1	924	<1	-	-	-	-	1040	-	136	3430	0.2	-	25	-	2160	1.52	119	115	2.78	<0.01	<0.01	<0.01	2.8	-	2.8	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	<1	1030	<1	-	-	-	-	1160	-	130	3950	0.2	-	25	-	2370	3.5	136	127	2.6	0.04	0.04	<0.01	2.9	-	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

					Alkalinity								Ions											Nutrients									NA	OCP		Amino Aliphatics				Amino Aromatics				Anilines							
					Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hardness	Hardness (Filtered)	Alkalinity (total)	Hydroxide	Hardness as CaCO3	Calcium	Calcium (Filtered)	Chloride	Fluoride	Potassium	Potassium (Filtered)	Sodium	Sodium (Filtered)	Ionic Balance	Anions Total	Cations Total	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)	Phosphate (as P)	Phosphate total (P)	p,p-DDT	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline	Alkalinity (Carbonate as CaCO3)	Alkalinity (Carbonate)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
EQL					1									1	1	0.1		1		1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.01	0.1						2	2	2	2	2			4	4	4	2	2	2	2	1	
Airport Regulations - Water pollution - accepted limits - fresh water																												0.1	.005|0.01																						
ANZG (2018) Freshwater 95% toxicant DGVs																								0.9																									250		
ANZG (2018) Freshwater 99% toxicant DGVs																								0.32																									8		
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	<1	951	<1	-	-	-	-	1190	-	160	3420	0.1	-	24	-	2150	0.69	120	118	2.3	<0.01	<0.01	<0.01	2.3	-	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	<1	1040	<1	-	-	-	-	1200	-	131	4030	0.2	-	25	-	2380	3.96	139	128	2.77	0.03	0.03	<0.01	2.8	-	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	<1	953	<1	-	-	-	-	1200	-	160	3500	0.1	-	24	-	2150	1.48	122	118	2.3	<0.01	<0.01	<0.01	2.3	-	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290720	6243765	Aerotropolis	SMGW-BH-D329	18-Feb-21	<20	1000	<10	-	-	-	-	-	470	-	5700	<0.5	56	-	4700	-	-	-	-	0.29	<0.05	<0.02	<0.02	0.4	<0.01	0.4	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290720	6243765	Aerotropolis	SMGW-BH-D329	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.36	<0.05	<0.02	<0.02	0.9	-	0.9	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290742	6243691	Aerotropolis	SMGW-BH-D208	17-May-21	<1	643	<1	-	-	-	-	982	-	131	2790	0.8	-	6	-	2060	0.58	111	109	0.09	0.02	0.02	<0.01	16.1	-	16.1	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	-	-
290762	6248715	WSI	SMGW-BH-C305	20-Apr-21	<20	-	<10	-	-	-	-	-	440	-	9500	0.6	18	-	5200	-	-	-	-	0.12	-	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290762	6248715	WSI	SMGW-BH-C305	12-May-21	<20	-	<10	-	-	-	-	-	380	-	11,000	0.6	8.9	-	4200	-	-	-	-	0.02	-	<0.02	<0.02	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290945	6248669	WSI	SMGW-BH-C304	20-Apr-21	<20	-	<10	-	-	-	-	-	58	-	7500	<0.5	26	-	3300	-	-	-	-	0.08	-	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290964	6253779	Luddenham Road	SMGW-BH-B120	26-Aug-20	<1	926	<1	-	-	-	-	5010	-	241	8240	0.3	-	21	-	4140	0.22	279	281	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290964	6253779	Luddenham Road	SMGW-BH-B120	23-Feb-21	<1	537	<1	-	-	-	-	3440	-	170	5920	0.2	-	16	-	2860	0.75	196	194	0.12	0.02	0.02	<0.01	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291041	6254012	Luddenham Road	SMGW-BH-B320	15-Apr-21	<20	-	<10	-	-	-	-	-	400	-	9200	<0.5	22	-	5600	-	-	-	-	0.09	<0.05	0.03	<0.02	-	-	<0.2	-	-	-	-	-	-	<2	<2	-	<2	<2	<2	-	<4	-	-	-	-	<2	-	-
291173	6254264	Luddenham Road	SMGW-BH-B319	02-Mar-21	<1	235	<1	-	-	-	-	6090	-	96	10,800	0.4	-	32	-	4920	4.57	369	336	0.9	<0.01	<0.01	<0.01	1.5	-	1.5	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	-	-
291173	6254264	Luddenham Road	SMGW-BH-B319	26-May-21	<1	215	<1	-	-	-	-	5760	-	95	9210	0.4	-	31	-	4740	0.22	323	322	0.69	<0.01	<0.01	<0.01	1.3	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21	-	<0.02	<0.02	0.2	-	<0.2	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.31	-	0.02	0.03	0.4	-	0.3	-	<0.05	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.27	-	-	-	0.4	-	0.4	-	<0.05	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	<0.02	<0.02	0.3	-	0.3	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.23	-	<0.02	<0.02	0.2	-	0.2	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	05-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.66	-	<0.02	<0.02	<0.2	-	<0.2	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	13-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.26	-	0.08	<0.02	0.4	-	0.3	-	0.18	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	<0.02	<0.02	0.3	-	0.3	-	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	<20	-	<10	-	-	-	-	-	230	-	8700	<0.5	16	-	5400	-	-	-	-	0.67	<0.05	<0.02	<0.02	-	<0.01	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	<5	-	-	-	4300	-	-	-	-	190	8300	0.3	-	18	-	5700	11	-	-	0.7	-	<0.005	<0.005	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	<20	-	<10	-	-	-	-	-	260	-	9200	<0.5	19	-	6200	-	-	-	-	0.67	<0.05	<0.02	<0.02	-	<0.01	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<20	-	<10	-	-	-	-	-	260	-	11,000	<0.5	15	-	5100	-	-	-	-	0.23	-	<0.02	<0.02	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	12-May-21	-	-	<5	4400	-	920	<5	-	220	-	9300	0.3	12	-	5000	-	0.92	-	-	0.72	-	<0.005	<0.005	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<20	-	<10	-	-	-	-	-	280	-	11,000	<0.5	16	-	5400	-	-	-	-	0.2	-	<0.02	<0.02	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<20	-	<10	-	-	-	-	-	32	-	4100	<0.5	4.8	-	1800	-	-	-	-	0.12	<0.05	<0.02	<0.02	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<5	-	-	-	500	-	-	-	-	33	3300	0.5	-	5.4	-	2400	4	-	-	0.12	-	<0.005	<0.005	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<20	-	<10	-	-	-	-	-	33	-	4000	<0.5	4.8	-	1900	-	-	-	-	0.13	<0.05	<0.02	<0.02	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291351	6247890	WSI	SMGW-BH-C343	20-Apr-21	<20	-	<10	-	-	-	-	-	370	-	9900	<0.5	36	-	4900	-	-	-	-	0.41	0.14	0.14	<0.02	-	-	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291370	6249349	WSI	SMGW-BH-C301	15-Apr-21	<20	-	<10	-	-	-	-	-	76	-	4900	0.6	6.5	-	3500	-	-	-	-	<0.01	0.65	0.62	0.04	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	<1	769	<1	-	-	-	-	2690	-	180	5090	0.6	-	16	-	2520	3.39	175	164	0.55	0.05	0.04	0.01	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jul-20	<1	1080	<1	-	-	-	-	4550	-	303	8170	0.6	-	20	-	4290	0.75	282	278	0.23	-	<0.01	<0.01	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	<1	1150	<1	-	-	-	-	4400	-	296	7990	0.6	-	17	-	4090	2.7	281	266	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	<1	658	<1	-	-	-	-	3350	-	252	5370	0.5	-	15	-	3140	3.48	190	204	<0.01	0.48	0.42	0.06	1.7	-	1.2	1.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	<1	1120	<1	-	-	-	-	4390	-	297	7680	0.6	-	18	-	4070	0.94	270	265	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	<1	1120	<1	-	-	-	-	4860	-	312	7980	0.5	-	25	-	4290	1.34	277	284	0.56	0.02	0.02	-	0.7	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	<1	774	<1	-	-	-	-	3820	-	291	6580	0.5	-	16	-	3480	0.31	230	228	0.01	0.47	0.45	0.02	1.6	-	1.1	1.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291504	6255514	Luddenham Road	SMGW-BH-B313	10-May-21	<20	-	<10	-	-	-	-	-	420	-	12,000	<0.5	11	-	5000	-	-	-	-	0.13	-	0.04	<0.02	-	-	-	-	-	-	-	-	-	<5	<5	-	<5	<5	<5	-	<5	-	-	-	-	<5	-	-
291542	6248270	WSI	SMGW-BH-C340	20-Apr-21	<20	-	<10	-	-	-	-	-	150	-	10,000	<0.5	32	-	5900	-	-	-	-	0.45	<0.05	0.04	<0.02	-	-	6.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291562	6255942	Luddenham Road	SMGW-BH-B312	12-Feb-21	<20	980	<10	-	-	-	-	3600	270	-	15,000	<0.5	6.8	-	3700	-	-	-	-	0.02	<0.05	<0.02	<0.02	<0.2	0.07	<0.2	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291562	6255942	Luddenham Road	SMGW-BH-B312	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16	<0.05	<0.02	<0.02	0.6	1.3	0.6	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	30-Jun-20	<1	1250	<1	-	-	-	-	3840	-	235	7330	0.4	-	30	-	4090	1.86	246	255	0.2	0.46	0.31	0.15	1.4	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	26-Aug-20	<1	862	<1	-	-	-	-	3610	-	308	6400	0.6	-	20	-	3630	4.63	210	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	22-Feb-21	<1	1260	<1	-	-	-	-	3930	-	273	7090	0.6	-	27	-	4050	3.02	240	255	<0.1	0.03	0.03	<0.01	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	-	-	-	-	-	-	-	-	826	-	-	-	51	-	3320	-	-	-	-	12.5	-	-	-	-	0.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	-	-	-	-	-	-	-	-	-	826	-	-	-	51	-	3320	-	-	-	12.5	0.45	-	-	17.6	0.08	17.1	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	30-Jun-20	<1	264	<1	-	-	-	-	4720	-	305	6690	0.3	-	20	-	3050	0.13	227	227	1.31	0.63	0.63	<0.01	2.3	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	31-Jul-20	-	286	-	-	-	-	-	3590	-	235	5890	0.3	-	19	-	2510	5.75	204	181	1.23	2.2	2.2	-	3.8	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	26-Aug-20	<1	231	<1	-	-	-	-	4310	-	255	6810	0.2	-	16	-	2950	3.18	229	215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	15-Feb-21	<1	252	<1	-	-	-	-	4760	-	256	6720	0.2	-	17	-	3270	1.88	229	238	0.84	0.32	0.32	<0.01	1.6	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<20	-	<10	-	-	-	-	5200	34	-	3300	<0.5	6.6	-	5800	-	-	-	-	0.07	<0.05	<0.02	<0.02	-	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<5	-	-	-	6300	-	-	-	-	56	9400	<0.1	-	9	-	5900	15	-	-	0.14	-	<0.005	<0.005	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<20	-	<10	-	-	-	-	5000	33	-	3400	<0.5	6.5	-	5700	-	-	-	-	0.08	<0.05	<0.02	<0.02	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	<1	607	<1	-	-	-	-	-	360	-	8440	-	27	-	3870	-	4.47	261	239	2.96	-	<0.01	<0.01	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	18-Dec-19	<1	494	<1	-	-	-	-	3650	366	-	7840	0.2	27	-	3900	-	1.52	251	243	2.1	<0.01	<0.01	<0.01	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Jan-20	<1	565	<1	-	-	-	-	3640	335	-	8510	0.4	25	-	4230	-	2.54	271	257	2.2	<0.01	<0.01	<0.01	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Apr-20	<1	92	<1	-	-	-	-	-	40	-	390	0.1	3	-	210	-	2.52	14.8	14.1	0.23	-	<0.01	<0.01	-	0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	25-Aug-20	<1	88	<1	-	-	-	-	464	-	49	532	0.1	-	4	-	479	4.74	18.8	16.4	2.48	0.07	0.07	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	<1	-	-	-	-	-	-	-	-	360	8440	0.3	-	27	-	3870	4.47	261	239	2.96	<0.01	<0.01	<0.01	3.3	<0.05	3.3	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	<1	-
291737	6259192	Orchard Hills	SMGW-BH-A310	21-Apr-21	<20	-	<10	-	-	-	-	5000	250	-	9900	0.6	17	-	5700	-	-	-	-	0.88	<0.05	<0.02	<0.02	-	-	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

					Alkalinity								Ions											Nutrients									NA	OCP		Amino Aliphatics				Amino Aromatics				Anilines							
					Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hardness	Hardness (Filtered)	Alkalinity (total)	Hydroxide	Hardness as CaCO3	Calcium	Calcium (Filtered)	Chloride	Fluoride	Potassium	Potassium (Filtered)	Sodium	Sodium (Filtered)	Ionic Balance	Anions Total	Cations Total	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)	Phosphate (as P)	Phosphate total (P)	p,p-DDT	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline	Alkalinity (Carbonate as CaCO3)	Alkalinity (Carbonate)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
EQL					1									1	1	0.1		1		1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.01	0.1						2	2	2	2	2			4	4	4	2	2	2	2	1	
Airport Regulations - Water pollution - accepted limits - fresh water																												0.1	.005|0.01																						
ANZG (2018) Freshwater 95% toxicant DGVs																								0.9																									250		
ANZG (2018) Freshwater 99% toxicant DGVs																								0.32																									8		
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
291737	6259191	Orchard Hills	SMGW-BH-A310S	26-Apr-21	<20	-	<10	-	-	-	-	4100	15	-	4200	<0.5	3.9	-	5400	-	-	-	-	0.19	<0.05	<0.02	<0.02	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.99	-	0.05	<0.02	1.8	-	1.8	-	0.24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.91	-	<0.02	<0.02	1.1	-	1.1	-	0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.98	-	<0.02	<0.02	2.7	-	2.7	-	0.46	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	19-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.99	-	0.09	<0.02	1.2	-	1.1	-	0.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.93	-	0.03	<0.02	0.9	-	0.9	-	0.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.57	-	0.6	<0.02	1	-	0.4	-	0.11	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	0.46	<0.02	1.1	-	0.7	-	0.02	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6259051	Orchard Hills	SMGW-BH-A311	11-May-21	<20	-	<10	-	-	-	-	-	180	-	8600	<0.5	9.9	-	4400	-	-	-	-	0.84	-	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	28-May-20	<1	789	<1	-	-	-	-	-	-	516	7970	0.3	-	50	-	4180	1.85	259	249	5.34	<0.01	<0.01	<0.01	5	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	01-Jul-20	<1	872	<1	-	-	-	-	2820	-	465	7350	0.6	-	36	-	3990	2.9	245	231	3.18	0.01	0.01	<0.01	4.6	-	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	30-Jul-20	<1	822	<1	-	-	-	-	2820	-	467	7180	0.6	-	37	-	4100	2.44	247	236	3.88	<0.01	<0.01	<0.01	4.5	-	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	20-Aug-20	<1	830	<1	-	-	-	-	2650	-	448	7520	0.5	-	35	-	3700	9.05	257	215	3.92	0.07	0.07	<0.01	4.1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	17-Feb-21	<1	962	<1	-	-	-	-	3160	-	513	7160	0.4	-	42	-	4030	1.04	244	239	4.69	0.08	0.08	<0.01	4.9	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-May-20	-	678	-	-	-	-	-	3880	-	650	8290	0.1	-	47	-	3630	2.8	250	237	5.11	0.04	0.04	-	4.9	-	4.9	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jun-20	<1	649	<1	-	-	-	-	3950	-	670	8790	0.2	-	52	-	4090	1.54	266	258	4.32	<0.01	<0.01	<0.01	4.6	-	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jul-20	<1	816	<1	-	-	-	-	4020	-	696	9050	0.3	-	46	-	4480	0.12	276	276	4.93	0.02	0.02	<0.01	4.4	-	4.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	25-Aug-20	<1	746	<1	-	-	-	-	3600	-	597	7860	0.3	-	43	-	3650	2.36	243	232	3.96	0.05	0.05	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-Nov-20	<1	734	<1	-	-	-	-	3720	-	590	7950	0.2	-	50	-	3850	<0.01	243	243	4.53	0.06	0.06	<0.01	4.3	-	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	15-Feb-21	<1	754	<1	-	-	-	-	3990	-	587	7960	0.2	-	52	-	4160	3.38	245	262	4.5	0.04	0.04	<0.01	4.7	-	4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291836	6257203	Luddenham Road	SMGW-BH-B309	02-Mar-21	<1	73	<1	-	-	-	-	-	-	26	1360	<0.1	-	1	-	958	1.93	45	46.8	0.08	<0.01	<0.01	<0.01	0.4	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291848	6248251	WSI	SMGW-BH-C341	20-Apr-21	<20	-	<10	-	-	-	-	-	21	-	2800	<0.5	<5	-	1800	-	-	-	-	0.02	0.06	0.06	<0.02	-	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	26-May-20	<1	147	<1	-	-	-	-	5510	-	394	12,400	0.2	-	10	-	5640	1.94	370	356	0.27	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	29-Jun-20	<1	65	<1	-	-	-	-	5470	-	458	13,300	0.2	-	10	-	5520	6.41	398	350	0.35	<0.1	<0.1	<0.1	1.1	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	25-Aug-20	<1	132	<1	-	-	-	-	5020	-	379	12,400	0.3	-	8	-	5000	7.52	370	318	0.13	0.09	0.09	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	17-Feb-21	<1	59	<1	-	-	-	-	4540	-	228	11,800	0.3	-	5	-	5250	4.19	347	319	0.3	0.11	0.11	<0.1	1.1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-May-20	<1	7	<1	-	-	-	-	4930	-	45	10,200	0.5	-	6	-	5220	5.03	302	334	0.2	0.05	0.03	0.02	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jun-20	<1	5	<1	-	-	-	-	4450	-	52	10,800	0.3	-	5	-	4680	4.13	318	293	0.5	0.02	<0.01	0.02	0.7	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jul-20	<1	6	<1	-	-	-	-	4640	-	44	10,800	0.5	-	4	-	4750	2.97	318	299	0.62	0.15	0.14	0.01	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-Aug-20	<1	3	<1	-	-	-	-	4300	-	42	9360	0.3	-	4	-	4680	2.6	275	290	0.4	0.02	0.02	<0.01	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	23-Feb-21	<1	9	<1	-	-	-	-	5110	-	50	9980	0.3	-	5	-	5370	6.32	296	336	0.31	-	<0.01	<0.01	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	26-May-20	1150	<1	101	-	-	-	-	1680	-	668	4070	0.1	-	71	-	2350	1.29	141	138	3.15	0.03	0.03	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	30-Jun-20	1390	<1	149	-	-	-	-	2270	-	910	5300	0.2	-	104	-	2890	2.1	181	174	3.4	0.06	0.06	<0.01	4	-	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	20-Aug-20	376	<1	62	-	-	-	-	1600	-	639	4780	<0.1	-	32	-	2020	8.89	144	120	2.11	0.05	<0.01	0.05	2.6	-	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	17-Feb-21	77	<1	51	-	-	-	-	3750	-	1500	10,000	<0.1	-	41	-	4980	0.86	288	293	2.34	0.08	0.08	<0.01	2.7	-	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jun-20	<1	520	<1	-	-	-	-	3830	-	674	9240	0.4	-	49	-	4230	1.79	271	262	6.28	<0.01	<0.01	<0.01	5.7	-	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jul-20	<1	541	<1	-	-	-	-	3670	-	658	9160	0.4	-	43	-	4050	3.73	270	251	6.37	0.03	0.01	0.02	6.7	-	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	20-Aug-20	<1	558	<1	-	-	-	-	3700	-	655	9810	0.4	-	44	-	4050	7.02	289	251	6.46	0.08	0.08	<0.01	6.2	-	6.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	17-Feb-21	<1	585	<1	-	-	-	-	4170	-	671	9450	0.4	-	48	-	4470	0.02	279	279	6.47	<0.01	<0.01	<0.01	6.7	-	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jun-20	<1	791	<1	-	-	-	-	5710	-	374	10,400	0.2	-	23	-	4770	1.88	328	316	2.54	<0.01	<0.01	<0.01	2.6	-	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jul-20	<1	270	<1	-	-	-	-	1730	-	143	1850	0.2	-	11	-	1700	25.5	64.6	109	1.52	0.16	0.11	0.05	2.2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	20-Aug-20	<1	339	<1	-	-	-	-	1480	-	162	2340	0.2	-	11	-	1380	4.71	81.7	89.8	1.17	0.12	0.12	<0.01	2.1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	17-Feb-21	<1	197	<1	-	-	-	-	727	-	136	1130	0.2	-	8	-	504	9.08	44	36.6	1.59	0.1	0.1	<0.01	2.3	-	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291953	6260516	Northern Tunnels	SMGW-BH-A019	06-Sep-19	<1 - 229	198	2290	-	-	-	-	-	478	478	2030	0.2	94	94	1650	1650	4.34	107	98.1	<0.01	0.04	0.02	0.02	9.2	0.08	9.2	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	198	-
292033	6257200	Luddenham Road	SMGW-BH-B308	02-Mar-21	-	159	-	-	-	-	-	-	-	41	2910	0.3	-	5	-	1670	1.86	90.7	87.4	0.33	<0.01	-	-	1.5	-	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	26-May-20	<1	81	6	-	-	-	-	104	-	35	160	0.2	-	9	-	188	3.24	11.2	10.5	0.09	0.49	0.16	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	30-Jun-20	<1	180	<1	-	-	-	-	80	-	17	155	0.2	-	5	-	217	1.46	11.5	11.2	<0.01	0.23	0.23	<0.01	0.8	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	25-Aug-20	<1	276	<1	-	-	-	-	155	-	29	284	0.3	-	5	-	258	6.53	16.5	14.4	<0.01	0.48	0.48	<0.01	0.7	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	17-Feb-21	<1	210	<1	-	-	-	-	282	-	95	65	0.2	-	10	-	85	1.26	9.36	9.6	0.41	0.15	0.12	0.03	3.2	-	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	-	-	-	-	-	-	-	-	-	-	-	<0.5 - 0.	-	-	-	-	-	-	-	.83 - 1.	<0.05	<0.005	<0.005	-	-	<0.2	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.62	<0.05	<0.02	<0.02	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	<0.02	650	<0.01	-	-	-	-	2500	240	-	10,000	<0.5	20	-	3000	-	-	-	-	0.97	<0.05	<0.02	<0.02	0.9	0.02	0.9	-	-	-	-	-	-	<5	<5	-	<5	<5	<5	-	<5	-	-	-	-	<5	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.62	<0.05	<0.02	<0.02	<0.2	<0.5	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	26-May-20	<1	713	<1	-	-	-	-	2120	-	320	6470	0.2	-	30	-	2420	14	197	148	2.18	0.14	0.14	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	30-Jun-20	<1	720	<1	-	-	-	-	2400	-	346	5860	0.2	-	32	-	2750	3.27	180	168	3.16	<0.01	<0.01	<0.01	3.6	-	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	25-Aug-20	<1	701	<1	-	-	-	-	2510	-	353	5180	0.3	-	34	-	2920	5.16	160	178	2.55	0.09	0.09	<0.01	3.7	-	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	17-Feb-21	<1	687	<1	-	-	-	-	2500	-	378	5900	0.2	-	34	-	2830	1.8	180	174	3.06	0.01	0.01	<0.01	3.3	-	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	-	11	0.07	12	-	0.9	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	-	13	<0.02	14	-	1.2	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.84	-	5.6	0.33	6.8	-	0.9	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	-	-	-	8.6	-	<0.5	-	0.07	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	1.6	<0.02	3.1	-	1.4	-	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

					Alkalinity								Ions											Nutrients									NA	OCP		Amino Aliphatics				Amino Aromatics				Anilines							
					Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hardness	Hardness (Filtered)	Alkalinity (total)	Hydroxide	Hardness as CaCO3	Calcium	Calcium (Filtered)	Chloride	Fluoride	Potassium	Potassium (Filtered)	Sodium	Sodium (Filtered)	Ionic Balance	Anions Total	Cations Total	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)	Phosphate (as P)	Phosphate total (P)	p,p-DDT	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline	Alkalinity (Carbonate as CaCO3)	Alkalinity (Carbonate)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
EQL					1									1	1	0.1		1		1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.01	0.1						2	2	2	2	2			4	4	4	2	2	2	2	1	
Airport Regulations - Water pollution - accepted limits - fresh water																												0.1	.005|0.01																						
ANZG (2018) Freshwater 95% toxicant DGVs																								0.9																									250		
ANZG (2018) Freshwater 99% toxicant DGVs																								0.32																									8		
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
292130	6249000	WSI	WSA GW20	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8	-	0.05	<0.02	1.8	-	1.8	-	0.14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	05-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	-	<0.02	<0.02	1.6	-	1.6	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.5	-	<0.02	<0.02	2.7	-	2.7	-	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	0.03	<0.02	3	-	3	-	0.02	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47	-	0.19	0.13	0.8	-	0.5	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.17	-	2.4	0.22	3.3	-	0.7	-	0.14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.66	-	<0.2	<0.2	0.6	-	0.6	-	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.75	-	-	-	0.8	-	0.8	-	0.05	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	21-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.76	-	<0.4	<0.4	0.8	-	0.8	-	0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.84	-	<0.02	<0.02	0.8	-	0.7	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	-	<0.02	<0.02	0.8	-	0.8	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	05-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.76	-	<0.02	<0.02	1.2	-	1.2	-	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.86	-	<0.02	<0.02	1.2	-	1.1	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.97	-	<0.02	<0.02	1	-	1	-	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	26-May-20	<1	659	<1	-	-	-	-	2880	-	514	6490	0.3	-	44	-	3100	0.69	196	194	4.23	0.03	0.03	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	29-Jun-20	<1	658	<1	-	-	-	-	2660	-	465	6500	0.2	-	39	-	2930	3.97	196	182	4.52	<0.01	<0.01	<0.01	6.6	-	6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	25-Aug-20	<1	678	<1	-	-	-	-	2240	-	406	6200	0.3	-	36	-	2440	10.8	188	152	4.68	<0.01	<0.01	<0.01	6	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	16-Feb-21	-	593	-	-	-	-	-	2790	-	514	6360	0.2	-	42	-	3030	0.67	191	189	5.46	0.02	0.02	-	5.5	-	5.5	0.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-May-20	<1	502	<1	-	-	-	-	962	-	62	3800	0.4	-	3	-	2330	1.42	124	121	0.02	0.06	0.06	<0.01	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	29-Jun-20	<1	443	<1	-	-	-	-	932	-	60	4120	0.4	-	3	-	2210	6.83	132	115	<0.01	0.02	0.02	<0.01	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	<1	450	<1	-	-	-	-	904	-	62	3650	0.4	-	2	-	2150	3.01	118	112	0.04	0.02	0.02	<0.01	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	15-Feb-21	<1	440	<1	-	-	-	-	1120	-	72	4090	0.3	-	3	-	2430	1.09	131	128	<0.01	0.02	0.02	<0.01	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	<1	448	<1	-	-	-	-	870	-	60	3590	0.4	-	2	-	2080	3.95	117	108	0.02	0.02	0.02	<0.01	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	06-Sep-19	<1	80	<1	-	-	-	-	-	37	-	782	-	1	-	318	-	5.53	23.9	21.4	0.09	-	<0.01	<0.01	-	0.68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	18-Dec-19	<1	83	<1	-	-	-	-	365	34	-	754	0.2	1	-	321	-	4.18	23.1	21.3	0.04	<0.01	<0.01	0.01	-	0.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Jan-20	<1	74	<1	-	-	-	-	364	32	-	776	<0.1	1	-	333	-	3.95	23.6	21.8	0.05	<0.01	<0.01	<0.01	-	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Apr-20	<1	101	<1	-	-	-	-	-	57	-	988	<0.1	4	-	395	-	1.62	30	29.1	0.42	-	<0.01	<0.01	-	0.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	<1	98	<1	-	-	-	-	393	-	52	599	0.1	-	8	-	230	2.56	19	18.1	0.79	0.02	0.02	<0.01	1.7	-	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	05-Sep-19	<1	-	-	-	-	-	-	-	-	37	782	<0.1	-	1	-	318	5.53	23.9	21.4	0.09	0.33	0.33	<0.01	1.1	0.68	0.8	-	-	-	-	-	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	<1	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	<1	101	<1	-	-	-	-	354	-	48	583	0.1	-	7	-	205	7.03	18.6	16.2	0.81	<0.01	<0.01	<0.01	1.8	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	26-May-20	<1	1240	<1	-	-	-	-	1420	-	287	2460	0.2	-	40	-	1280	5.11	94.2	85	2.94	0.25	0.25	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	01-Jul-20	<1	1150	<1	-	-	-	-	1310	-	267	2520	0.2	-	36	-	1190	8.8	94.1	78.8	2.82	0.01	0.01	<0.01	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	25-Aug-20	<1	1170	<1	-	-	-	-	1390	-	283	1920	0.3	-	40	-	1260	3.74	77.6	83.6	3.73	0.13	0.13	<0.01	4.3	-	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	16-Feb-21	<1	1240	<1	-	-	-	-	1480	-	306	2460	0.2	-	42	-	1280	4.39	94.3	86.3	3.7	3.25	3.25	<0.01	8.4	-	5.1	0.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	26-May-20	<1	302	<1	-	-	-	-	196	-	19	692	0.3	-	1	-	452	5.23	26.2	23.6	0.06	0.02	0.02	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	25-Aug-20	<1	279	<1	-	-	-	-	191	-	17	575	0.2	-	1	-	423	0.55	22.5	22.2	0.06	0.02	0.02	<0.01	0.2	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	16-Feb-21	<1	246	<1	-	-	-	-	143	-	11	581	0.2	-	<1	-	403	4.03	22.1	20.4	0.03	0.04	0.04	<0.01	0.4	-	0.4	0.85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Dec-20	<1	103	<1	-	-	-	-	40	-	8	111	0.2	-	16	-	91	3.22	5.52	5.18	0.87	0.19	0.16	0.03	1.7	-	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Mar-21	<1	123	<1	-	-	-	-	535	-	28	1260	0.2	-	14	-	674	0.41	40.7	40.4	0.77	<0.01	<0.01	<0.01	1.4	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	26-May-21	<1	138	6	-	-	-	-	187	-	19	357	0.2	-	18	-	270	7.6	13.7	16	0.76	0.1	<0.01	0.1	1.4	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3	<0.05	<0.02	<0.02	0.6	0.06	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	06-Mar-20	<1	223	<1	-	-	-	-	1340	124	-	4200	0.3	3	-	2230	-	4.34	135	124	0.03	-	0.01	<0.01	-	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	05-Jun-20	<1	274	<1	-	-	-	-	1310	-	100	4220	0.3	-	2	-	2270	4.55	137	125	<0.1	0.01	0.01	<0.01	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	<1	173	<1	-	-	-	-	1380	-	64	5090	0.3	-	2	-	2440	8.46	158	134	0.04	<0.1	<0.1	<0.1	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jul-20	<1	88	<1	-	-	-	-	1440	-	53	4870	0.3	-	1	-	2590	2.33	148	141	0.04	<0.01	<0.01	<0.01	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	27-Aug-20	<1	105	<1	-	-	-	-	1310	-	67	4480	0.2	-	1	-	2370	2.86	137	129	0.03	0.05	0.05	<0.01	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	<1	99	<1	-	-	-	-	1220	-	58	4380	0.2	-	1	-	2300	3.85	134	124	0.03	<0.01	<0.01	<0.01	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	<1	155	<1	-	-	-	-	1370	-	66	5330	0.2	-	2	-	2450	10.6	166	134	<0.01	<0.1	<0.1	<0.1	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	<1	107	<1	-	-	-	-	1220	-	58	4300	0.2	-	2	-	2300	3.14	133	124	0.03	<0.01	<0.01	<0.01	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	18-Dec-19	<1	547	<1	-	-	-	-	5850	594	-	9920	0.3	35	-	4160	-	1.98	311	299	2.14	<0.01	<0.01	<0.01	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	24-Jan-20	<1	314	<1	-	-	-	-	5180	570	-	7670	0.3	34	-	3880	-	7.18	237	273	0.76	-	0.27	0.1	-	0.13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Mar-20	<1	223	<1	-	-	-	-	1304	124	-	4200	-	3	-	2230	-	4.34	135	124	0.03	0.01	0.01	<0.01	-	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	20-Apr-20	<1	534	<1	-	-	-	-	-	578	-	8900	0.3	35	-	3960	-	1.42	276	284	2.12	-	<0.01	<0.01	-	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	27-Aug-20	<1	60	<1	-	-	-	-	1510	-	123	3590	0.2	-	10	-	1740	5.97	120	106	0.07	3.43	3.43	<0.01	3.8	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

					Alkalinity								Ions										
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hardness	Hardness (Filtered)	Alkalinity (total)	Hydroxide	Hardness as CaCO3	Calcium	Calcium (Filtered)	Chloride	Fluoride	Potassium	Potassium (Filtered)	Sodium	Sodium (Filtered)	Ionic Balance	Anions Total	Cations Total
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L
EQL					1									1	1	0.1		1		1	0.01	0.01	0.01
Airport Regulations - Water pollution - accepted limits - fresh water																							
ANZG (2018) Freshwater 95% toxicant DGVs																							
ANZG (2018) Freshwater 99% toxicant DGVs																							
PFAS NEMP 2018 Table 5 Freshwater 99%																							
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	<1	-	-	-	-	-	-	-	-	628	8920	0.3	-	40	-	3440	3.54	267	249
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	<20	510	<10	-	-	-	-	4600	510	-	11,000	1	58	-	4000	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	<20	430	<10	-	-	-	-	3700	210	-	9000	<0.5	39	-	3400	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	715	-	-	-	-	-	3580	-	493	7630	0.5	-	30	-	3200	4.45	231	211
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	<1	702	<1	-	-	-	-	3470	-	484	7490	0.4	-	28	-	3110	4.94	227	205
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	<1	620	<1	-	-	-	-	2900	-	391	5400	0.5	-	25	-	2860	5	166	183
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	<1	580	<1	-	-	-	-	2560	-	353	5420	0.6	-	22	-	2410	2.78	165	156
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	<1	498	<1	-	-	-	-	2120	-	319	4260	0.3	-	19	-	1950	1.1	130	128
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	<1	681	<1	-	-	-	-	3600	-	508	6310	0.4	-	31	-	3180	4.53	193	211

					Nutrients									NA	OCP	
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Phosphorus	Total Kjeldahl Nitrogen (TKN)	Phosphate (as P)	Phosphate total (P)	p,p-DDT	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
EQL					0.01	0.01	0.01	0.01	0.1	0.01	0.1					
Airport Regulations - Water pollution - accepted limits - fresh water									0.1	.005|0.01						
ANZG (2018) Freshwater 95% toxicant DGVs					0.9											
ANZG (2018) Freshwater 99% toxicant DGVs					0.32											
PFAS NEMP 2018 Table 5 Freshwater 99%																
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	2.96	<0.01	<0.01	<0.01	3	<0.05	3	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	1.2	<0.05	<0.02	<0.02	<0.2	0.02	<0.2	-	-	<0.2	-	-
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	-	-	-	<0.01	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	0.03	<0.05	<0.02	<0.02	<0.2	0.19	<0.2	-	-	<0.2	-	-
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	-	-	-	0.37	-	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	1.06	0.07	0.07	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	1.22	0.02	0.02	<0.01	1.8	-	1.8	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	1.22	0.02	<0.01	0.02	1.2	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	1.14	<0.01	<0.01	<0.01	1.6	-	1.6	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	0.94	0.07	0.07	<0.01	1.1	-	1	0.37	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	1.07	0.05	0.03	0.02	-	-	-	-	-	-	-	-

					Amino Aliphatics				Amino Aromatics				Anilines							
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosomethylethylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	N-Nitrosodiphenyl & Diphenylamine	2-nitroaniline	3-nitroaniline	4-chloroaniline	4-nitroaniline	2-methyl-5-nitroaniline	Aniline	Alkalinity (Carbonate as CaCO3)	Alkalinity (Carbonate)
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
EQL					2	2	2	2	2			4	4	4	2	2	2	2	1	
Airport Regulations - Water pollution - accepted limits - fresh water																				
ANZG (2018) Freshwater 95% toxicant DGVs																		250		
ANZG (2018) Freshwater 99% toxicant DGVs																		8		
PFAS NEMP 2018 Table 5 Freshwater 99%																				
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	<2	<2	<2	<2	<2	-	-	<4	<4	<4	<2	<2	<2	<2	<1	-
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

					Inorganics										Organic	Metals																																				
					Total Phosphorus as P (Organic Phosphate as P)	Total Dissolved Solids @180oC	Total Dissolved Solids @180oC (Filtered)	Sulfate as SO4	Sulfate as SO4 (Filtered)	TKN (as N)	Alkalinity (Bicarbonate as CaCO3)	Total Suspended Solids (TSS)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Methane	Magnesium	Magnesium (Filtered)	Aluminium	Aluminium (Filtered)	Arsenic III	Arsenic	Arsenic (Filtered)	Barium	Barium (Filtered)	Beryllium	Beryllium (Filtered)	Boron	Boron (Filtered)	Cadmium	Cadmium (Filtered)	Chromium (hexavalent)	Chromium (hexavalent) (Filtered)	Chromium (III+VI)	Chromium (III+VI) (Filtered)	Cobalt	Cobalt (Filtered)	Copper	Copper (Filtered)	Iron	Iron (Filtered)	Lead	Lead (Filtered)	Manganese	Manganese (Filtered)	Mercury	Mercury (Filtered)	Molybdenum	Molybdenum (Filtered)	Nickel	Nickel (Filtered)	Selenium
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									1		1			0.01	0.01		1		0.01			0.001								0.0001		0.01		0.001		0.001		0.001		0.05		0.001		0.001		0.0001				0.001	
Airport Regulations - Water pollution - accepted limits - fresh water																		0.1	0.1		0.05	0.05			0.004	0.004			0.0002	0.0002			0.01	0.01			0.002	0.002	1	1	0.001	0.001			0.0001	0.0001			0.015	0.015	0.005
ANZG (2018) Freshwater 95% toxicant DGVs																		0.055	0.055	0.024							0.37	0.37	0.0002	0.0002	0.0004	0.0004					0.0014	0.0014			0.0034	0.0034	1.9	1.9	0.0006	0.0006			0.011	0.011	0.011
ANZG (2018) Freshwater 99% toxicant DGVs																		0.027	0.027	0.001							0.09	0.09	0.00006	0.00006	0.00001	0.00001					0.001	0.001			0.001	0.001	1.2	1.2	0.00006	0.00006			0.008	0.008	0.005
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
288413	6246761	WSI	WSA GW06	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	0.003	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.003	-
288413	6246761	WSI	WSA GW06	15-Jun-17	-	-	-	-	-	-	-	-	0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	06-Oct-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.26	-
288413	6246761	WSI	WSA GW06	18-Dec-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.0005	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.012	-
288413	6246761	WSI	WSA GW06	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	18-Apr-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.034	-	-	-	0.003	-	-	-	<0.0001	-	-	-	0.025	-
288413	6246761	WSI	WSA GW06	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Jul-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.002	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.01	-
288413	6246761	WSI	WSA GW06	06-Sep-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.0002	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.003	-
288413	6246761	WSI	WSA GW06	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	12-Dec-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.003	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.01	-
288413	6246761	WSI	WSA GW06	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Apr-19	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.004	-
288413	6246761	WSI	WSA GW06	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	28-Mar-17	-	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.002	-
288413	6246761	WSI	WSA GW07	29-Mar-17	-	-	-	-	-	-	-	-	0.38	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	0.002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.002	-
288413	6246761	WSI	WSA GW07	15-Jun-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	06-Oct-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.057	-
288413	6246761	WSI	WSA GW07	18-Dec-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.0005	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.002	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.002	-
288413	6246761	WSI	WSA GW07	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Apr-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.017	-	-	-	0.003	-	-	-	<0.0001	-	-	-	<0.001	-
288413	6246761	WSI	WSA GW07	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Jul-18	-	-	-	-	-	-	-	-	0.18	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.024	-	-	-	0.002	-	-	-	<0.0001	-	-	-	0.012	-
288413	6246761	WSI	WSA GW07	06-Sep-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.0002	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.027	-	-	-	0.002	-	-	-	<0.0001	-	-	-	0.006	-
288413	6246761	WSI	WSA GW07	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	13-Dec-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.002	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.016	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.005	-
288413	6246761	WSI	WSA GW07	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Apr-19	-	-	-	-	-	-	-	-	2.5	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	0.0002	-	-	-	<0.001	-	-	-	0.031	-	-	-	0.002	-	-	-	<0.0001	-	-	-	0.01	-
288413	6246761	WSI	WSA GW07	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	29-Mar-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.0001	-	0.004	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.002	-
288574	6246161	WSI	WSA GW04	15-Jun-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	06-Oct-17	-	-	-	-	-	-	-	-	0.08	-	-	-	-	-	-	<0.0005	-	0.005	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.067	-
288574	6246161	WSI	WSA GW04	18-Dec-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.0005	-	0.005	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.033	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.12	-
288574	6246161	WSI	WSA GW04	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Apr-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	0.004	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.11	-
288574	6246161	WSI	WSA GW04	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Jul-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	0.003	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.093	-
288574	6246161	WSI	WSA GW04	06-Sep-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	0.003	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.005	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.01	-
288574	6246161	WSI	WSA GW04	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	12-Dec-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	0.004	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.008	-	-	-	0.001	-	-	-	<0.0001	-	-	-	0.007	-
288574	6246161	WSI	WSA GW04	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Apr-19	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	0.004	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.016	-
288574	6246161	WSI	WSA GW04	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288838	6247416	WSI	SMGW-BH-C206	08-Sep-20	<0.05	17,000	-	-	953	-	-	<5	-	<0.01	<0.01	-	609	0.07	<0.01	-	<0.001	<0.001	0.083	0.076	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.002	0.002	0.002	0.001	0.23	-	<0.001	<0.001	0.21	0.194	<0.0001	<0.0001	0.006	0.005	0.002	0.002	<0.01
288852	6246085	WSI	SMGW-BH-C002	27-Aug-20	0.14	468	-	-	12	-	-	20	-	0.06	-	-	4	1.47	0.16	-	0.005	0.004	0.169	0.132	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.002	<0.001	0.001	<0.001	0.002	0.002	2.53	0.72	0.007	0.005	0.033	0.011	<0.0001	<0.0001	<0.001	<0.001	0.003	0.002	<0.01
288852	6246085	WSI	SMGW-BH-C002	06-Sep-19	-	-	-	-	38	-	19	-	-	<0.01	-	-	174	-	<0.01	-	-	<0.001	-	-	-	-	-	-	-	<0.0001	-	-	-	<0.001	-	<0.001	-	<0.001	-	<0.05	-	<0.001	-	0.001	-	<0.0001	-	-	-	<0.001	-
288878	6246774	WSI	SMGW-BH-C208	17-May-21	0.24	13,900	-	-	52	-	-	168	-	<0.01	9.56	-	116	0.64	<0.01	-	0.008	0.003	2.75	2.21	0.003	<0.001	<0.05	<0.05	0.0033	<0.0001	-	-	0.004	<0.001	0.005	<0.001	0.125	<0.001	0.86	0.11	0.003	<0.001	0.156	0.1	<0.0001	<0.0001	0.007	0.006	0.024	0.002	<0.01
288970	6246102	WSI	SMGW-BH-C001S	27-Aug-20	0.08	2470	-	-	91	-	-	187	-	<0.01	-	-	72	2.91	0.22	-	0.002	<0.001	0.098	0.087	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.003	<0.001	0.004	0.002	0.006	0.002	3.41	0.23	0.003	<0.001	0.409	0.45	<0.0001	<0.0001	0.001	<0.001	0.003	0.002	<0.01
288970	6246102	WSI	SMGW-BH-C001S	06-Sep-19	-	-	-	-	502	-	703	-	-	<0.01	-	-	451	-	<0.01	-	-	0.001	-	-	-	-	-	-	-	<0.0001	-	-	-	<0.001	-	0.026	-	<0.001	-	0.63	-	<0.001	-	4.55	-	<0.0001	-	-	-	0.006	-
289013	6246245	WSI	WSA GW08	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	29-Mar-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	0.002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	0.0008	-	-	-	0.003	-
289013	6246245	WSI	WSA GW08	15-Jun-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	05-Oct-17	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	<0.0005	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.009	-
289013	6246245	WSI	WSA GW08	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Dec-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.0005	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	<0.001	-
289013	6246245	WSI	WSA GW08	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Apr-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.005	-
289013	6246245	WSI	WSA GW08	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Jul-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.004	-
289013	6246245	WSI	WSA GW08	06-Sep-18	-	-	-	-	-	-	-	-	<2.5	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.004	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.005	-
289013	6246245	WSI	WSA GW08	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	13-Dec-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	0.0003	-	-	-	0.005	-

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Inorganics: Total Phosphorus as P (Organic Phosphate as P)	Total Dissolved Solids @180oC	Total Dissolved Solids @180oC (Filtered)	Sulfate as SO4	Sulfate as SO4 (Filtered)	TKN (as N)	Alkalinity (Bicarbonate as CaCO3)	Total Suspended Solids (TSS)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Organic: Methane	Metals: Magnesium	Magnesium (Filtered)	Aluminium	Aluminium (Filtered)	Arsenic III	Arsenic	Arsenic (Filtered)	Barium	Barium (Filtered)	Beryllium	Beryllium (Filtered)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									1		1			0.01	0.01		1		0.01			0.001				
Airport Regulations - Water pollution - accepted limits - fresh water																		0.1	0.1		0.05	0.05			0.004	0.004
ANZG (2018) Freshwater 95% toxicant DGVs																		0.055	0.055	0.024						
ANZG (2018) Freshwater 99% toxicant DGVs																		0.027	0.027	0.001						
PFAS NEMP 2018 Table 5 Freshwater 99%																										
289013	6246245	WSI	WSA GW08	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-
289013	6246245	WSI	WSA GW08	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	07-Oct-20	0.33	10,200	-	-	151	-	-	330	-	<0.01	-	-	132	0.89	0.06	-	<0.001	<0.001	1.06	0.712	<0.001	<0.001
289128	6246455	WSI	SMGW-BH-C209	02-Dec-20	0.04	9440	-	-	29	-	-	34	-	0.02	-	-	126	0.39	<0.01	-	0.001	<0.001	20.5	10.7	<0.001	<0.001
289220	6247060	WSI	SMGW-BH-C331	29-Apr-21	-	-	-	400	-	-	1200	-	-	-	<0.05	610	-	-	-	-	-	<0.01	-	-	-	-
289414	6246914	WSI	SMGW-BH-C325	29-Apr-21	-	-	-	730	-	-	730	-	-	<0.01	0.15	200	-	-	<0.05	-	0.004	0.003	0.15	0.15	<0.001	<0.001
289595	6246615	WSI	SMGW-BH-C322	13-May-21	-	-	-	1300	-	-	380	-	-	0.02	-	1200	-	-	-	-	-	0.003	-	0.07	-	<0.001
289595	6246615	WSI	SMGW-BH-C322	13-May-21	-	-	-	1500	-	-	370	-	-	-	-	1100	-	-	-	-	<0.001	<0.001	0.077	0.063	<0.0005	<0.0005
289595	6246615	WSI	SMGW-BH-C322	13-May-21	-	-	-	1300	-	-	320	-	-	0.02	-	1100	-	-	-	-	-	0.002	-	0.07	-	<0.001
289599	6245794	Bringelly	SMGW-BH-D303S	18-Feb-21	-	-	-	2100	-	-	990	-	-	0.1	<0.05	2000	-	-	<0.05	-	0.004	0.003	0.03	0.03	<0.001	<0.001
289599	6245794	Bringelly	SMGW-BH-D303S	15-Mar-21	-	-	-	2000	-	-	1000	-	-	0.11	-	2100	-	-	<0.05	-	0.004	<0.001	0.06	0.03	<0.001	<0.001
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	1900	-	-	1200	-	-	0.03	-	1600	-	0.08	<0.05	-	0.003	0.003	0.04	0.04	<0.001	<0.001
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	2200	-	-	1100	-	-	-	-	1400	-	-	<0.01	-	0.005	0.001	0.098	0.036	<0.0005	<0.0005
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	1900	-	-	1200	-	-	0.07	-	1600	-	-	<0.05	-	0.003	0.002	0.03	0.03	<0.001	<0.001
289601	6245801	Bringelly	SMGW-BH-D303	17-Feb-21	-	-	-	850	-	2.9	760	130	-	0.07	<0.05	820	-	0.07	<0.05	-	0.002	<0.001	0.15	0.13	<0.001	<0.001
289601	6245801	Bringelly	SMGW-BH-D303	15-Mar-21	-	-	-	950	-	3.4	920	68	-	0.16	-	1100	-	<0.05	<0.05	-	<0.001	<0.001	0.06	0.06	<0.001	<0.001
289601	6245801	Bringelly	SMGW-BH-D303	05-May-21	-	-	-	960	-	-	1100	-	-	0.07	-	800	-	-	<0.05	-	0.002	<0.001	0.06	0.05	<0.001	<0.001
289629	6246535	WSI	SMGW-BH-C320	29-Apr-21	-	-	-	650	-	-	870	-	-	0.05	<0.05	840	-	-	<0.05	-	0.001	0.001	0.1	0.08	<0.001	<0.001
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	-	-	-	240	-	-	970	-	-	0.02	<0.05	120	-	-	<0.05	-	0.002	0.002	0.14	0.1	<0.001	<0.001
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	-	-	-	190	-	-	920	-	-	-	0.009	-	130	-	<0.01	-	0.002	<0.001	0.17	0.11	<0.0005	<0.0005
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	-	-	-	250	-	-	960	-	-	0.08	<0.05	120	-	-	<0.05	-	0.002	0.001	0.13	0.13	<0.001	<0.001
289809	6246630	WSI	SMGW-BH-C321	13-May-21	-	-	-	220	-	-	1100	-	-	0.01	-	130	-	-	-	-	-	0.001	-	0.13	-	<0.001
290097	6245334	Bringelly	SMGW-BH-D305	15-Feb-21	-	-	-	1100	-	2	710	1400	-	0.06	<0.05	980	-	11	0.08	-	0.007	<0.001	0.32	0.24	<0.001	<0.001
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	1200	-	-	1100	-	-	0.02	-	1500	-	-	<0.05	-	0.004	0.002	0.09	0.07	<0.001	<0.001
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	670	-	-	1100	-	-	-	-	1200	-	-	<0.01	-	0.003	<0.001	0.14	0.072	<0.0005	<0.0005
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	1200	-	-	1200	-	-	0.01	-	1400	-	0.08	<0.05	-	0.003	<0.001	0.09	0.07	<0.001	<0.001
290274	6248345	WSI	SMGW-BH-C201S	27-Aug-20	0.09	20,000	-	-	968	-	-	<5	-	<0.01	<0.01	-	1110	0.02	0.01	-	0.001	0.001	0.051	0.044	0.001	0.001
290279	6248348	WSI	SMGW-BH-C201	03-Sep-20	0.11	15,400	-	-	137	-	-	106	-	<0.01	11.3	-	547	5.03	<0.01	-	0.003	<0.001	5.22	1.87	<0.001	<0.001
290304	6247361	WSI	SMGW-BH-C351	21-Apr-21	-	-	-	1100	-	-	1200	-	-	-	<0.05	1100	-	-	-	-	-	0.001	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	27-Nov-20	0.16	13,900	-	-	860	-	-	19	-	<0.01	-	-	513	0.64	<0.01	-	0.003	0.002	0.153	0.141	<0.001	<0.001
290390	6244794	Southern Tunnels	SMGW-BH-D205	17-Feb-21	0.27	-	-	-	1210	-	-	19	-	<0.01	-	-	575	0.17	<0.01	-	0.002	0.002	0.136	0.124	<0.001	<0.001
290390	6244794	Southern Tunnels	SMGW-BH-D205	26-May-21	0.27	15,100	-	-	1660	-	-	16	-	0.01	-	-	758	0.63	0.08	-	0.003	0.002	0.118	0.098	<0.001	<0.001
290461	6247764	WSI	WSA GW16	28-Mar-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.0001	-	0.016	-	-	-	-
290461	6247764	WSI	WSA GW16	14-Jun-17	-	-	-	-	-	-	-	-	0.54	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Oct-17	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	<0.001	-	-	-	-
290461	6247764	WSI	WSA GW16	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	17-Apr-18	-	-	-	-	-	-	-	-	0.07	-	-	-	-	-	-	-	-	0.003	-	-	-	-
290461	6247764	WSI	WSA GW16	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Jul-18	-	-	-	-	-	-	-	-	2.2	-	-	-	-	-	-	-	-	0.002	-	-	-	-
290461	6247764	WSI	WSA GW16	07-Sep-18	-	-	-	-	-	-	-	-	0.97	-	-	-	-	-	-	<0.002	-	0.002	-	-	-	-
290461	6247764	WSI	WSA GW16	12-Dec-18	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	<0.002	-	<0.001	-	-	-	-
290461	6247764	WSI	WSA GW16	03-Apr-19	-	-	-	-	-	-	-	-	0.31	-	-	-	-	-	-	-	-	<0.001	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290513	6244560	Southern Tunnels	SMGW-BH-D206	17-May-21	0.16	18,700	-	-	89	-	-	8	-	<0.01	0.791	-	580	<0.01	<0.01	-	<0.001	<0.001	1.28	1.25	<0.001	<0.001
290677	6244060	Aerotropolis	SMGW-BH-D322	15-Mar-21	-	-	-	320	-	-	1200	-	-	-	<0.05	330	-	-	-	-	<0.001	-	-	-	-	-
290695	6243992	Aerotropolis	SMGW-BH-D324	22-Feb-21	-	-	-	750	-	0.9	1200	9.8	-	0.14	<0.05	740	-	-	-	-	<0.001	-	-	-	-	-
290695	6243992	Aerotropolis	SMGW-BH-D324	15-Mar-21	-	-	-	-	-	3.6	-	-	-	0.01	-	-	-	-	-	-	0.001	-	-	-	-	-
290704	6243892	Aerotropolis	SMGW-BH-D326	18-Feb-21	-	-	-	210	-	4.5	1000	14	-	-	<0.05	350	-	-	-	-	0.001	0.001	-	-	-	-
290704	6243892	Aerotropolis	SMGW-BH-D326	16-Mar-21	-	-	-	-	-	2.4	-	-	-	-	-	-	-	-	-	-	0.0015	-	-	-	-	-
290715	6243914	Aerotropolis	SMGW-BH-D308	18-Feb-21	-	-	-	410	-	3	740	11	-	0.02	<0.05	190	-	<0.05	<0.05	-	<0.001	0.002	0.03	0.29	<0.001	<0.001
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jun-20	<0.02	7620	-	-	270	-	-	6	-	<0.02	-	-	210	0.09	<0.01	-	<0.001	<0.001	0.248	0.225	<0.001	<0.001
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	<0.01	7830	-	-	337	-	-	11	-	<0.01	-	-	213	0.02	<0.01	-	<0.001	<0.001	0.195	0.178	<0.001	<0.001
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Aug-20	<0.02	8260	-	-	207	-	-	27	-	<0.01	-	-	167	0.26	0.01	-	0.002	0.001	0.505	0.452	<0.001	<0.001
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Nov-20	<0.02	9120	-	-	155	-	-	26	-	<0.01	-	-	222	0.32	<0.01	-	0.001	<0.001	0.431	0.485	<0.001	<0.001
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	<0.02	9100	-	-	141	-	-	20	-	<0.01	-	-	242	0.28	<0.01	-	0.001	<0.001	0.52	0.548	<0.001	<0.001
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	0.02	8130	-	-	322	-	-	10	-	<0.01	-	-	204	0.03	<0.01	-	<0.001	<0.001	0.198	0.175	<0.001	<0.001
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	9030	-	-	151	-	-	19	-	<0.01	-	-	236	0.22	<0.01	-	<0.001	<0.001	0.525	0.544	<0.001	<0.001
290716	6243821	Aerotropolis	SMGW-BH-D109S	11-Aug-20	<0.02	14,900	-	-	824	-	-	93	-	<0.01	-	-	767	0.55	<0.01	-	0.005	0.004	0.08	0.065	<0.001	<0.001
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Aug-20	0.07	15,000	-	-	944	-	-	174	-	<0.01	-	-	667	2.64	<0.01	-	0.009	0.004	0.148	0.065	<0.001	<0.001
290716	6243821	Aerotropolis	SMGW-BH-D109S	28-Sep-20	0.05	15,000	-	-	821	-	-	18	-	0.05	-	-	852	0.36	<0.01	-	0.009	0.008	0.101	0.095	<0.001	<0.001
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Nov-20	<0.05	16,200	-	-	896	-	-	22	-	<0.01	-	-	825	0.14	<0.01	-	0.016	0.012	0.082	0.08	<0.001	<0.001
290716	6243821	Aerotropolis	SMGW-BH-D109S	01-Feb-21	0.1	15,600	-	-	963	-	-	44	-	<0.01	-	-	923	0.25	<0.01	-	0.016	0.015	0.077	0.076	<0.001	<0.001
290716	6243821	Aerotropolis	SMGW-BH-D109S	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	01-Sep-20	0.22	7020	-	-	183	-	-	21	-	<0.01	0.011	-	171	0.29	0.02	-	0.002	0.001	0.197	0.195	<0.001	<0.001
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	0.09	7370	-	-	202	-	-	<5	-	0.08	-	-	204	0.1	<0.01	-	<0.001	0.001	0.169	0.164	<0.001	<0.001

Location_Code	Sampled_Date	Boron	Boron (Filtered)	Cadmium	Cadmium (Filtered)	Chromium (hexavalent)	Chromium (hexavalent) (Filtered)	Chromium (III+VI)	Chromium (III+VI) (Filtered)	Cobalt	Cobalt (Filtered)	Copper	Copper (Filtered)	Iron	Iron (Filtered)	Lead	Lead (Filtered)	Manganese	Manganese (Filtered)	Mercury	Mercury (Filtered)	Molybdenum	Molybdenum (Filtered)	Nickel	Nickel (Filtered)	Selenium
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL					0.0001		0.01		0.001		0.001		0.001		0.05		0.001		0.001		0.0001				0.001	
Airport Regulations - Water pollution - accepted limits - fresh water				0.0002	0.0002			0.01	0.01			0.002	0.002	1	1	0.001	0.001			0.0001	0.0001			0.015	0.015	0.005
ANZG (2018) Freshwater 95% toxicant DGVs		0.37	0.37	0.0002	0.0002	0.0004	0.0004					0.0014	0.0014			0.0034	0.0034	1.9	1.9	0.0006	0.0006			0.011	0.011	0.011
ANZG (2018) Freshwater 99% toxicant DGVs		0.09	0.09	0.00006	0.00006	0.00001	0.00001					0.001	0.001			0.001	0.001	1.2	1.2	0.00006	0.00006			0.008	0.008	0.005
PFAS NEMP 2018 Table 5 Freshwater 99%																										
WSA GW08	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW08	04-Apr-19	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	0.0001	-	-	-	0.002	-
WSA GW08	04-Apr-19	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	0.0002	-	-	-	<0.001	-
WSA GW08	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-C209	07-Oct-20	<0.05	<0.05	<0.0001	<0.0001	-	-	0.006	0.003	0.002	<0.001	<0.001	<0.001	1.7	0.59	<0.001	<0.001	0.516	0.474	<0.0001	<0.0001	0.002	<0.001	0.001	<0.001	<0.01
SMGW-BH-C209	02-Dec-20	0.07	0.07	<0.0001	<0.0001	-	-	0.003	<0.001	0.001	<0.001	0.001	<0.001	1.67	1.02	<0.001	<0.001	0.223	0.197	<0.0001	<0.0001	0.001	<0.001	<0.001	<0.001	<0.01
SMGW-BH-C331	29-Apr-21	-	-	-	-	-	-	-	<0.01	-	<0.01	-	-	-	<0.5	-	<0.01	-	0.58	-	-	-	-	-	<0.01	-
SMGW-BH-C325	29-Apr-21	<0.05	<0.05	<0.0002	<0.0002	-	-	<0.001	<0.001	0.11	0.11	-	<0.001	-	-	<0.001	<0.001	17	17	0.00003	-	<0.005	<0.005	0.043	0.044	0.003
SMGW-BH-C322	13-May-21	-	<0.05	-	-	-	-	-	0.008	-	0.007	-	-	-	-	-	-	-	0.6	-	<0.0001	-	<0.005	-	0.012	-
SMGW-BH-C322	13-May-21	<0.02	<0.02	-	-	-	-	0.004	0.001	0.008	0.007	-	<0.001	0.81	0.15	-	<0.001	0.74	0.72	<0.00005	<0.00005	<0.001	<0.001	-	-	0.002
SMGW-BH-C322	13-May-21	-	<0.05	-	-	-	-	-	0.004	-	0.018	-	0.001	-	0.14	-	<0.001	-	2.2	-	<0.0001	-	<0.005	-	0.042	-
SMGW-BH-D303S	18-Feb-21	0.1	0.09	<0.0002	<0.0002	-	-	0.001	<0.001	0.003	0.003	-	-	0.85	0.18	<0.001	<0.001	0.32	0.29	<0.0001	<0.0001	<0.005	<0.005	0.009	0.009	<0.001
SMGW-BH-D303S	15-Mar-21	-	-	<0.0002	<0.0002	-	-	0.003	<0.001	0.007	0.003	-	0.001	-	0.23	-	<0.001	0.78	0.4	<0.0000	<0.0001	<0.005	<0.005	0.012	0.006	<0.001
SMGW-BH-D303S	05-May-21	0.07	0.09	<0.0002	<0.0002	-	-	<0.001	<0.001	0.003	0.004	<0.001	<0.001	0.22	<0.05	<0.001	<0.001	0.84	1.6	<0.0001	<0.0001	<0.005	<0.005	0.004	0.006	0.001
SMGW-BH-D303S	05-May-21	0.07	0.08	<0.0001	<0.0001	-	-	0.009	<0.001	0.006	0.005	-	-	-	<0.01	0.004	<0.001	0.99	1.6	<0.00005	<0.00005	<0.001	0.001	0.011	0.007	0.001
SMGW-BH-D303S	05-May-21	0.08	0.09	<0.0002	<0.0002	-	-	<0.001	<0.001	0.003	0.004	0.001	<0.001	0.75	<0.05	<0.001	<0.001	0.87	1.6	<0.0001	<0.0001	<0.005	<0.005	0.004	0.006	0.002
SMGW-BH-D303	17-Feb-21	<0.5	<0.5	<0.0002	<0.0002	-	-	001 - 0.(	<0.001	0.002	0.002	0.006	0.004	0.68	0.2	<0.001	<0.001	.21 - 0.2	0.21	<0.0001	<0.0001	<0.005	<0.005	0.11	0.095	<0.001
SMGW-BH-D303	15-Mar-21	<0.5	<0.5	<0.0002	<0.0002	-	-	<0.001	<0.001	0.002	0.001	0.001	<0.001	0.13	0.68	<0.001	<0.001	-	-	<0.0000	<0.0001	<0.005	<0.005	0.011	0.01	<0.001
SMGW-BH-D303	05-May-21	0.08	0.08	<0.0002	<0.0002	-	-	<0.001	<0.001	<0.001	<0.001	-	-	0.33	<0.05	<0.001	<0.001	0.23	0.19	<0.0001	<0.0001	<0.005	<0.005	-	-	-
SMGW-BH-C320	29-Apr-21	<0.05	<0.05	<0.0002	<0.0002	-	-	0.001	<0.001	0.003	0.002	<0.001	<0.001	0.26	<0.05	<0.001	<0.001	0.3	0.23	<0.0000	-	<0.005	<0.005	0.008	0.006	0.001
SMGW-BH-C321	29-Apr-21	<0.05	<0.05	<0.0002	<0.0002	-	-	<0.001	<0.001	0.007	0.005	0.001	<0.001	-	0.55	<0.001	<0.001	2.3	1.7	<0.0000	-	<0.005	<0.005	0.003	0.002	<0.001
SMGW-BH-C321	29-Apr-21	0.02	0.02	<0.0001	<0.0001	-	-	0.001	<0.001	0.009	0.006	<0.001	<0.001	-	0.88	<0.001	<0.001	3	2.1	<0.00005	<0.00005	0.001	0.001	0.004	0.002	<0.001
SMGW-BH-C321	29-Apr-21	<0.05	<0.05	<0.0002	<0.0002	-	-	<0.001	<0.001	0.006	0.006	0.001	<0.001	-	0.6	<0.001	<0.001	2.1	2	<0.0000	-	<0.005	<0.005	0.003	0.002	<0.001
SMGW-BH-C321	13-May-21	-	<0.05	-	<0.0002	-	-	-	0.002	-	0.008	-	0.001	-	-	-	<0.001	-	2.7	-	<0.0001	-	<0.005	-	0.003	-
SMGW-BH-D305	15-Feb-21	<0.05	<0.05	<0.0002	<0.0002	-	-	0.03	<0.001	0.011	0.004	0.03	0.003	22	0.23	0.01	<0.001	1.2	0.72	<0.0001	<0.0001	0.009	0.008	0.017	0.007	<0.001
SMGW-BH-D305	10-May-21	0.07	0.07	<0.0002	<0.0002	-	-	<0.001	<0.001	0.005	0.003	-	<0.001	0.21	0.21	<0.001	<0.001	0.76	0.7	<0.0001	<0.0001	<0.005	<0.005	0.023	0.023	0.002
SMGW-BH-D305	10-May-21	0.05	0.05	<0.0002	<0.0001	-	-	-	<0.001	0.009	0.003	-	-	-	0.56	0.005	<0.001	1.1	0.76	<0.00005	<0.00005	0.001	0.001	0.03	0.022	<0.002
SMGW-BH-D305	10-May-21	0.08	0.07	<0.0002	<0.0002	-	-	<0.001	<0.001	0.005	0.003	-	<0.001	0.35	0.35	<0.001	<0.001	0.75	0.69	<0.0001	<0.0001	<0.005	<0.005	-	-	0.001
SMGW-BH-C201S	27-Aug-20	0.05	0.05	0.0001	0.0001	-	-	0.001	0.001	0.004	0.003	0.001	0.001	<0.05	<0.05	0.001	0.001	1.45	1.32	0.0001	0.0001	0.001	0.001	0.004	0.004	0.01
SMGW-BH-C201	03-Sep-20	0.07	0.07	0.0002	<0.0001	-	-	0.026	<0.001	0.006	0.003	0.086	<0.001	7.7	2.46	0.011	<0.001	0.62	0.384	<0.0001	<0.0001	0.005	0.003	0.007	<0.001	<0.01
SMGW-BH-C351	21-Apr-21	-	-	-	<0.0002	-	-	-	0.001	-	<0.001	-	<0.001	-	0.12	-	<0.001	-	0.44	-	<0.0001	-	-	-	<0.001	-
SMGW-BH-D205	27-Nov-20	0.06	0.09	<0.0001	<0.0001	-	-	0.004	0.002	0.006	0.006	0.004	<0.001	3.18	2.33	0.001	<0.001	0.592	0.562	<0.0001	<0.0001	0.002	0.001	0.001	<0.001	<0.01
SMGW-BH-D205	17-Feb-21	0.06	0.05	<0.0001	<0.0001	-	-	0.002	0.001	0.004	0.002	<0.001	<0.001	2.63	1.7	<0.001	<0.001	0.836	0.828	<0.0001	<0.0001	<0.001	<0.001	0.002	<0.001	<0.01
SMGW-BH-D205	26-May-21	0.06	0.05	0.0001	<0.0001	-	-	0.003	0.002	0.003	0.001	0.008	0.002	2.46	1	0.002	<0.001	1.23	1.17	<0.0001	<0.0001	0.003	<0.001	0.003	0.001	<0.01
WSA GW16	28-Mar-17	-	-	-	<0.0002	-	-	-	0.002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.005	-
WSA GW16	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW16	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW16	05-Oct-17	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.009	-
WSA GW16	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW16	17-Apr-18	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.008	-	-	-	0.001	-	-	-	<0.0001	-	-	-	0.005	-
WSA GW16	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW16	05-Jul-18	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.002	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.03	-
WSA GW16	07-Sep-18	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.002	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.025	-
WSA GW16	12-Dec-18	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.006	-
WSA GW16	03-Apr-19	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.018	-
WSA GW16	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-D206	17-May-21	<0.05	0.06	<0.0001	<0.0001	-	-	<0.001	<0.001	0.028	0.028	0.002	0.001	<0.05	<0.05	<0.001	<0.001	0.484	0.464	<0.0001	<0.0001	0.003	0.002	0.033	0.033	<0.01
SMGW-BH-D322	15-Mar-21	-	-	<0.0002	-	-	-	<0.001	-	0.003	-	<0.001	-	0.34	-	<0.001	-	0.089	-	<0.0000	-	-	-	0.002	-	-
SMGW-BH-D324	22-Feb-21	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	0.6	-	<0.001	-	-	-	<0.0001	-	-	-	0.006	-	-
SMGW-BH-D324	15-Mar-21	-	-	<0.0002	-	-	-	<0.001	-	0.006	-	<0.001	-	0.32	-	<0.001	-	0.43	-	<0.0000	-	-	-	0.003	-	-
SMGW-BH-D326	18-Feb-21	-	-	<0.0002	<0.0002	-	-	<0.001	<0.001	<0.001	<0.001	0.003	0.003	0.6	0.9	<0.001	<0.001	0.045	0.045	<0.0001	<0.0001	-	-	0.066	0.024	-
SMGW-BH-D326	16-Mar-21	-	-	<0.0002	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	<0.0000	-	-	-	-	-	-
SMGW-BH-D308	18-Feb-21	0.08	0.09	<0.0002	<0.0002	-	-	<0.001	<0.001	<0.001	0.002	<0.001	0.01	<0.05	0.29	<0.001	<0.001	0.009	0.1	<0.0001	<0.0001	<0.005	0.015	0.002	0.014	<0.001
SMGW-BH-D109	29-Jun-20	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.002	0.002	<0.001	<0.001	4.44	4.58	<0.001	<0.001	0.233	0.228	<0.0001	<0.0001	0.006	0.004	<0.001	<0.001	<0.01
SMGW-BH-D109	29-Jul-20	0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.002	0.001	<0.001	<0.001	4.8	4.45	<0.001	<0.001	0.229	0.218	<0.0001	<0.0001	0.006	0.005	<0.001	<0.001	<0.01
SMGW-BH-D109	27-Aug-20	<0.05	0.07	<0.0001	<0.0001	-	-	<0.001	<0.001	0.017	0.004	0.001	<0.001	5.23	3.82	<0.001	<0.001	0.292	0.248	<0.0001	<0.0001	0.006	0.005	0.006	<0.001	<0.01
SMGW-BH-D109	27-Nov-20	0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.006	0.006	0.002	<0.001	-	4	<0.001	<0.001	0.181	0.186	<0.0001	<0.0001	0.004	0.003	<0.001	<0.001	<0.01
SMGW-BH-D109	15-Feb-21	0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.008	0.008	<0.001	0.001	4.89	3.77	<0.001	<0.001	0.121	0.124	<0.0001	<0.0001	0.004	0.003	<0.001	<0.001	<0.01
SMGW-BH-D109	29-Jul-20	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.002	0.001	<0.001	<0.001	4.75	4.29	<0.001	<0.001	0.23	0.209	<0.0001	<0.0001	0.006	0.004	<0.001	<0.001	<0.01
SMGW-BH-D109	15-Feb-21	0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.008	0.008	<0.001	0.001	4.57	3.64	<0.001	<0.001	0.12	0.122	<0.0001	<0.0001	0.004	0.003	<0.001	<0.001	<0.01
SMGW-BH-D109S	11-Aug-20	<0.05	<0.05	0.0002	0.0002	-	-	0.002	0.001	0.013	0.008	0.009	0.002	0.77	<0.05	<0.001	<0.001	0.141	0.096	<0.0001	<0.0001	0.004	0.003	0.027	0.023	<0.01
SMGW-BH-D109S	27-Aug-20	<0.05	<0.05	0.0002	<0.0001	-	-	0.009	<0.001	0.028	0.016	0.016	<0.001	4.07	0.17	0.006	<0.001	0.411	0.185	<0.0001	<0.0001	0.005	0.003	0.033	0.022	<0.01
SMGW-BH-D109S	28-Sep-20	<0.05	<0.05	<0.0001	<0.0001	-	-	0.001	<0.001	0.047	0.047	0.004	<0.001	1.16	0.68	0.001	<0.001	0.837	0.774	<0.0001	<0.0001	0.004	0.004	0.017	0.018	<0.01
SMGW-BH-D109S	27-Nov-20	<0.05	<0.05	<0.0001	<0.0001	-	-	0.001	<0.001	0.018	0.018	<0.001	<0.001	0.9	0.75	<0.001	<0.001	0.919	0.904	<0.0001	<0.0001	0.001	<0.001	0.012	0.011	<0.01
SMGW-BH-D109S	01-Feb-21	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.014	0.013	0.001	<0.001	1.11	0.83	<0.001	<0.001	0.792	0.872	<0.0001	<0.0001	0.002	0.001	0.012	0.01	<0.01
SMGW-BH-D109S	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-D207	01-Sep-20	0.07	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	<0.001	<0.001	0.018	<0.001	0.96	0.59	0.002	<0.001	0.062	0.055	<0.0001	<0.0001	0.001	<0.001	<0.001	<0.001	<0.01
SMGW-BH-D207	28-Sep-20	<0.05	0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	0.88	0.72	<0.001	<0.001	0.05	0.044	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.01

					Inorganics										Organic	Metals																																			
					Total Phosphorus as P (Organic Phosphate as P)	Total Dissolved Solids @180oC	Total Dissolved Solids @180oC (Filtered)	Sulfate as SO4	Sulfate as SO4 (Filtered)	TKN (as N)	Alkalinity (Bicarbonate as CaCO3)	Total Suspended Solids (TSS)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Methane	Magnesium	Magnesium (Filtered)	Aluminium	Aluminium (Filtered)	Arsenic III	Arsenic	Arsenic (Filtered)	Barium	Barium (Filtered)	Beryllium	Beryllium (Filtered)	Boron	Boron (Filtered)	Cadmium	Cadmium (Filtered)	Chromium (hexavalent)	Chromium (hexavalent) (Filtered)	Chromium (III+VI)	Chromium (III+VI) (Filtered)	Cobalt	Cobalt (Filtered)	Copper	Copper (Filtered)	Iron	Iron (Filtered)	Lead	Lead (Filtered)	Manganese	Manganese (Filtered)	Mercury	Mercury (Filtered)	Molybdenum	Molybdenum (Filtered)	Nickel	Nickel (Filtered)	Selenium
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									1		1			0.01	0.01		1		0.01			0.001								0.0001		0.01		0.001		0.001		0.001		0.05		0.001		0.001		0.0001				0.001	
Airport Regulations - Water pollution - accepted limits - fresh water																		0.1	0.1		0.05	0.05			0.004	0.004			0.0002	0.0002			0.01	0.01			0.002	0.002	1	1	0.001	0.001			0.0001	0.0001			0.015	0.015	0.005
ANZG (2018) Freshwater 95% toxicant DGVs																		0.055	0.055	0.024							0.37	0.37	0.0002	0.0002	0.0004	0.0004					0.0014	0.0014			0.0034	0.0034	1.9	1.9	0.0006	0.0006			0.011	0.011	0.011
ANZG (2018) Freshwater 99% toxicant DGVs																		0.027	0.027	0.001							0.09	0.09	0.00006	0.00006	0.00001	0.00001					0.001	0.001			0.001	0.001	1.2	1.2	0.00006	0.00006			0.008	0.008	0.005
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	0.08	6910	-	-	196	-	-	9	-	<0.01	-	-	192	0.19	<0.01	-	<0.001	<0.001	0.326	0.32	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.53	0.36	<0.001	<0.001	0.076	0.07	<0.0001	<0.0001	<0.001	<0.001	0.001	0.001	<0.01
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	0.11	7580	-	-	200	-	-	<5	-	0.1	-	-	211	0.11	<0.01	-	0.001	0.001	0.174	0.167	<0.001	<0.001	<0.05	0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	0.87	0.74	<0.001	<0.001	0.05	0.044	<0.0001	<0.0001	0.001	<0.001	<0.001	<0.001	<0.01
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	0.08	6820	-	-	189	-	-	15	-	<0.01	-	-	195	0.16	<0.01	-	0.001	<0.001	0.322	0.314	<0.001	<0.001	<0.05	<0.05	0.0002	<0.0001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.52	0.36	<0.001	<0.001	0.073	0.07	<0.0001	<0.0001	<0.001	<0.001	0.001	0.001	<0.01
290720	6243765	Aerotropolis	SMGW-BH-D329	18-Feb-21	-	-	-	820	-	0.4	1000	14	-	-	0.44	1200	-	-	-	-	0.001	<0.001	-	-	-	-	-	-	<0.0002	<0.0002	-	-	0.001	<0.001	0.005	0.005	0.002	<0.001	<0.05	<0.05	<0.001	<0.001	1	1	<0.0001	<0.0001	-	-	0.003	0.003	-
290720	6243765	Aerotropolis	SMGW-BH-D329	16-Mar-21	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-	-	-	0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	-
290742	6243691	Aerotropolis	SMGW-BH-D208	17-May-21	7.33	6850	-	-	918	-	-	187	-	<0.01	<0.01	-	159	3.02	<0.01	-	0.004	<0.001	0.098	0.075	<0.001	<0.001	0.08	0.09	0.0001	0.0001	-	-	0.005	<0.001	0.984	1.02	0.015	0.008	6.32	0.88	0.01	0.006	5.64	5.45	<0.0001	<0.0001	0.004	0.003	0.477	0.495	<0.01
290762	6248715	WSI	SMGW-BH-C305	20-Apr-21	-	-	-	1000	-	-	1000	-	-	0.01	<0.05	1100	-	-	<0.05	-	0.003	0.001	0.07	0.06	<0.001	<0.001	<0.05	<0.05	<0.0002	<0.0002	-	-	<0.001	<0.001	0.019	0.016	-	<0.001	0.33	<0.05	<0.001	<0.001	1.2	1.1	<0.0001	<0.0001	<0.005	0.006	0.011	0.008	<0.001
290762	6248715	WSI	SMGW-BH-C305	12-May-21	-	-	-	1100	-	-	1100	-	-	0.02	-	860	-	<0.05	<0.05	-	<0.001	<0.001	0.05	0.06	<0.001	<0.001	<0.05	<0.05	<0.0002	<0.0002	-	-	<0.001	<0.001	0.03	0.028	0.001	<0.001	<0.05	<0.05	<0.001	<0.001	0.93	0.87	<0.0001	<0.0001	<0.005	<0.005	0.009	0.008	0.001
290945	6248669	WSI	SMGW-BH-C304	20-Apr-21	-	-	-	510	-	-	1400	-	-	<0.01	<0.05	510	-	-	<0.05	-	0.003	0.001	0.1	0.09	<0.001	<0.001	<0.05	<0.05	<0.0002	<0.0002	-	-	0.002	<0.001	0.005	0.005	-	0.001	-	<0.05	-	<0.001	0.44	0.45	<0.0001	<0.0001	<0.005	<0.005	0.013	0.012	<0.001
290964	6253779	Luddenham Road	SMGW-BH-B120	26-Aug-20	-	17,200	-	-	1370	-	-	20	-	-	-	-	1070	1.29	0.01	-	0.003	0.002	0.094	0.074	<0.001	<0.001	<0.05	<0.05	0.0002	<0.0001	-	-	0.002	<0.001	0.006	0.005	0.006	<0.001	1.99	0.88	0.002	<0.001	0.752	0.751	<0.0001	<0.0001	0.002	<0.001	0.007	0.004	<0.01
290964	6253779	Luddenham Road	SMGW-BH-B120	23-Feb-21	0.09	11,800	-	-	900	-	-	10	-	0.44	-	-	732	0.44	<0.01	-	0.001	<0.001	0.04	0.039	<0.001	<0.001	<0.05	<0.05	0.0004	<0.0001	-	-	<0.001	<0.001	0.002	0.002	0.003	<0.001	0.58	0.12	<0.001	<0.001	0.68	0.651	<0.0001	<0.0001	<0.001	<0.001	0.004	0.004	<0.01
291041	6254012	Luddenham Road	SMGW-BH-B320	15-Apr-21	-	-	-	2100	-	-	240	-	-	-	<0.05	800	-	-	<0.05	-	0.003	0.002	0.07	0.06	<0.001	<0.001	0.12	0.09	<0.0002	<0.0002	-	-	0.001	<0.001	0.17	0.14	-	<0.001	-	-	-	<0.001	8.6	6.3	<0.0001	<0.0001	<0.005	0.005	-	-	0.002
291173	6254264	Luddenham Road	SMGW-BH-B319	02-Mar-21	<0.05	20,000	-	-	2850	-	-	124	-	<0.01	<0.01	-	1420	0.65	0.3	-	0.002	0.001	0.048	0.045	0.009	0.008	<0.05	<0.05	0.0014	0.0014	-	-	0.001	<0.001	0.825	0.785	0.016	0.014	0.34	0.07	0.002	<0.001	9.99	9.73	<0.0001	<0.0001	<0.001	<0.001	0.426	0.414	<0.01
291173	6254264	Luddenham Road	SMGW-BH-B319	26-May-21	-	22,000	-	-	2850	-	-	48	-	<0.01	-	-	1340	0.35	0.04	-	0.001	<0.001	0.051	0.043	0.004	0.004	<0.05	<0.05	0.0001	<0.0001	-	-	0.001	<0.001	1.18	1.11	0.003	0.002	3.56	2.45	<0.001	<0.001	14.4	13.5	<0.0001	<0.0001	<0.001	<0.001	0.566	0.533	<0.01
291265	6247780	WSI	WSA GW23	28-Mar-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.0001	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	0.002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	<0.001	-
291265	6247780	WSI	WSA GW23	04-Oct-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.0005	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.004	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.007	-
291265	6247780	WSI	WSA GW23	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Dec-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.0005	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.001	-
291265	6247780	WSI	WSA GW23	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Apr-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.073	-	-	-	<0.003	-	-	-	<0.0002	-	-	-	0.011	-
291265	6247780	WSI	WSA GW23	03-Jul-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.022	-	-	-	0.002	-	-	-	<0.0001	-	-	-	0.006	-
291265	6247780	WSI	WSA GW23	05-Sep-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.039	-	-	-	0.002	-	-	-	<0.0001	-	-	-	0.007	-
291265	6247780	WSI	WSA GW23	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	13-Dec-18	-	-	-	-	-	-	-	-	0.08	-	-	-	-	-	-	<0.002	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	0.001	-	-	-	0.016	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.005	-
291265	6247780	WSI	WSA GW23	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Apr-19	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.01	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.004	-
291265	6247780	WSI	WSA GW23	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	990	-	-	840	-	-	0.06	<0.05	1000	-	-	<0.05	-	0.003	<0.001	0.1	0.06	<0.001	<0.001	0.05	0.06	<0.0002	<0.0002	-	-	0.008	<0.001	0.009	0.005	-	-	-	0.82	0.006	<0.001	1.9	1.9	<0.0001	<0.0001	<0.005	<0.005	0.008	0.004	<0.001
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	810	-	-	880	-	-	-	<0.005	-	930	-	-	-	-	<0.001	-	0.063	-	<0.0005	-	0.03	-	<0.0001	-	-	-	0.002	-	0.005	-	-	-	0.86	-	<0.001	-	1.9	-	<0.00005	-	<0.001	-	0.003	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	1000	-	-	850	-	-	0.09	<0.05	1200	-	-	<0.05	-	0.004	<0.001	0.11	0.06	<0.001	<0.001	0.06	0.08	<0.0002	<0.0002	-	-	0.008	<0.001	0.01	0.005	-	-	-	0.57	0.007	<0.001	1.9	1.9	<0.0001	<0.0001	<0.005	<0.005	0.008	0.003	<0.001
291326	6249157	WSI	SMGW-BH-C302	12-May-21	-	-	-	1100	-	-	1100	-	-	<0.01	-	1000	-	0.09	<0.05	-	<0.001	<0.001	0.06	0.06	<0.001	<0.001	<0.05	<0.05	<0.0002	<0.0002	-	-	<0.001	<0.001	0.005	0.005	-	0.001	0.22	<0.05	<0.001	<0.001	1.6	1.5	<0.0001	<0.0001	<0.005	<0.005	0.01	0.01	<0.001
291326	6249157	WSI	SMGW-BH-C302	12-May-21	-	-	-	1000	-	-	920	-	-	-	-	930	-	-	<0.01	-	0.004	<0.001	0.25	0.062	0.0008	<0.0005	0.04	0.04	<0.0002	<0.0001	-	-	-	<0.001	0.01	0.005	-	-	-	<0.01	0.01	<0.001	2.2	2	<0.00005	<0.00005	<0.001	<0.001	-	0.024	<0.002
291326	6249157	WSI	SMGW-BH-C302	12-May-21	-	-	-	1000	-	-	1100	-	-	<0.01	-	1100	-	-	<0.05	-	<0.001	<0.001	0.06	0.06	<0.001	<0.001	<0.05	<0.05	<0.0002	<0.0002	-	-	0.002	<0.001	0.005	0.004	-	0.001	-	<0.05	-	<0.001	1.6	1.5	<0.0001	<0.0001	<0.005	<0.005	0.009	0.008	0.001
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	-	-	-	380	-	-	300	-	-	<0.05	<0.05	110	-	-	0.09	-	<0.001	<0.001	0.05	0.05	<0.001	<0.001	<0.05	<0.05	<0.0002	<0.0002	-	-	0.001	<0.001	0.063	0.055	-	-	-	0.95	<0.001	<0.001	1.3	1.2	<0.0001	<0.0001	<0.005	<0.005	0.024	0.022	<0.001
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	-	-	-	350	-	-	310	-	-	-	<0.005	-	100	-	0.02	-	<0.001	<0.001	0.056	0.041	<0.0005	<0.0005	0.02	<0.02	0.0001	<0.0001	-	-	0.003	<0.001	0.068	0.053	-	<0.001	-	<0.01	-	<0.001	1.5	1.1	<0.00005	<0.00005	<0.001	<0.001	0.027	0.021	<0.001
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	-	-	-	420	-	-	330	-	-	<0.05	<0.05	110	-	-	-	-	<0.001	<0.001	0.06	0.05	<0.001	<0.001	<0.05	<0.05	<0.0002	<0.0002	-	-	0.002	<0.001	0.063	0.058	-	0.001	-	0.98	<0.001	<0.001	1.3	1.2	<0.0001	<0.0001	<0.005	<0.005	0.026	0.022	<0.001
291351	6247890	WSI	SMGW-BH-C343	20-Apr-21	-	-	-	1500	-	-	990	-	-	-	<0.05	1300	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	0.006	-	<0.001	-	<0.05	-	<0.001	-	0.66	-	<0.0001	-	-	-	0.027	-
291370	6249349	WSI	SMGW-BH-C301	15-Apr-21	-	-	-	750	-	-	770	-	-	0.14	<0.05	400	-	-	<0.05	-	0.021	<0.001	0.37	0.07	0.003	<0.001	0.08	0.1	<0.0002	<0.0002	-	-	-	<0.001	0.057	0.009	-	<0.001	-	<0.05	0.054	<0.001	1.6	0.55	-	<0.0001	<0.005	<0.005	0.05	0.014	0.003
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	<1	10,400	-	-	784	-	-	63	-	0.51	-	-	544	1.64	<0.01	-	0.004	0.002	0.122	0.071	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.002	<0.001	0.02	0.004	0.007	0.001	1.32	0.07	0.002	<0.001	0.645	0.362	<0.0001	<0.0001	0.004	0.005	0.018	0.007	<0.01
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jul-20	<0.05	15,600	-	-	1450	-	-	35	-	0.04	-	-	921	0.51	<0.01	-	0.003	0.002	0.119	0.101	<0.001	<0.001	0.06	0.08	<0.0001	<0.0001	-	-	0.007	0.001	0.013	0.012	0.005	<0.001	0.76	0.32	<0.001	<0.001	0.681	0.654	<0.0001	<0.0001	0.003	0.002	0.016	0.015	<0.01
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	16,800	-	-	1570	-	-	20	-	-	-	-	889	0.31	<0.01	-	0.002	<0.001	0.111	0.103	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.014	0.009	0.003	<0.001	0.66	0.31	0.001	<0.001	0.645	0.634	<0.0001	<0.0001	0.002	<0.001	0.014	0.01	<0.01
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	0.34	-	-	-	1230	-	-	14	-	0.17	-	-	661	0.53	0.03	-	0.002	0.001	0.07	0.059	<0.001	<0.001	<0.05	<0.05	0.0002	<0.0001	-	-	0.002	<0.001	0.057	0.081	0.005	0.009	1.21	0.17	0.002	<0.001	2.38	1.81	<0.0001	<0.0001	0.002	0.002	0.031	0.039	<0.01
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	16,200	-	-	1500	-	-	27	-	-	-	-	886	0.26	<0.01	-	0.003	<0.001	0.104	0.102	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.015	0.009	0.007	<0.001	0.56	0.31	0.001	<0.001	0.607	0.628	<0.0001	<0.0001	0.002	<0.001	0.016	0.011	<0.01
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	0.1	16,600	-	-	1410	-	-	71	-	0.08	-	-	991	0.91	0.02	-	0.004	0.004	0.124	0.119	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.021	0.017	0.004	0.001	0.96	0.45	<0.001	<0.001	0.678	0.694	<0.0001	<0.0001	0.003	0.002	0.017	0.013	<0.01
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	0.34	-	-	-	1370	-	-	76	-	0.02	-	-	752	0.7	0.02	-	0.002	0.001	0.068	0.07	<0.001	<0.001	<0.05	<0.05	0.0002	<0.0001	-	-	0.002	<0.001	0.091	0.052	0.006	<0.001	1.36	0.23	0.001	<0.001	2.15	2.1	<0.0001	<0.0001	0.002	0.002	0.044	0.027	<0.01
291504	6255514	Luddenham Road	SMGW-BH-B313	10-May-21	-	-	-	550	-	-	120	-	-	0.03	<0.05	1400	-	0.06	<0.05	-	0.003	0.002	0.17	0.17	<0.001	<0.001	0.06	0.06	-	-	-	-	-	<0.001	0.11	0.11	-	-	0.11	<0.05	<0.001	<0.001	26	23	<0.0001	<0.0001	<0.005	<0.005	0.045	0.045	0.001
291542	6248270	WSI	SMGW-BH-C340	20-Apr-21	-	-	-	1600	-	-	380	-	-	-	<0.05	1500	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	0.002	-	0.18	-	<0.001	-	0.85	-	-	-	23	-	<0.0001	-	-	-	0.15	-
291562	6255942	Luddenham Road	SMGW-BH-B312	12-Feb-21	-	-	-	770	-	<0.2	980	28	-	0.05	<0.05	720	-	1.4	<0.05	-	0.007	0.008	0.17	0.13	<0.001	<0.001	0.07	0.09	0.0005	0.0005	<0.005	-	0.006	0.002	0.081	0.073	0.007	0.004	4.7	0.12	0.004	0.005	3.8	3.3	<0.0001	<0.0001	<0.005	<0.005	0.09	0.079	<0.001
291562	6255942	Luddenham Road	SMGW-BH-B312	16-Mar-21	-	-	-	-	-	0.6	-	-	-	<0.05	-	-	-	-	-	-	0.002	-	-	-	-	-	-	-	0.0003	-	-	-	<0.001	-	0.11	-	0.002	-	0.93	-	<0.001	-	5.2	-	<0.00001	-	-	-	0.046	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	30-Jun-20	0.34	15,200	-	-	689	-	-	90	-	0.06	-	-	790	2.18	<0.01	-	0.003	0.002	0.176	0.143	<0.001	<0.001	<0.05	<0.05	0.0001	<0.0001	-	-	0.008	<0.001	0.006	0.003	0.011	0.001	3.07	0.36	0.004	<0.001	0.726	0.629	<0.0001	<0.0001	0.007	0.004	0.009	0.005	<0.01
291572	6256049	Luddenham Road	SMGW-BH-B109	26-Aug-20	-	13,200	-	-	596	-	-	40	-	-	-	-	690	1.02	<0.01	-	0.001	<0.001	0.156	0.152	<0.001	<0.001	<0.05	<0.05	0.0002	0.0001	-	-	0.003	<0.001	0.005	0.004	0.007	0.001	1.6	<0.05	0.002	<0.001	1.32	1.33	<0.0001	<0.0001	0.006	0.003	0.009	0.006	<0.01
291572	6256049	Luddenham Road	SMGW-BH-B109	22-Feb-21	0.12	15,700	-	-	736	-	-	27	-	0.04	-	-	790	0.13	<0.01	-	<0.001	0.001	0.098	0.108	<0.001	<0.001	<0.05	<0.05	<0.0001	0.0002	-	-	<0.001	<0.001	0.004	0.004	0.001	<0.001	0.4	0.27	<0.001	<0.001	1.06	1.2	<0.0001	<0.0001	0.002	0.002	0.005	0.006	<0.01
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	94	-	<0.01	<0.01	-	<0.001	<0.001	-	-	-	-	-	-	<0.0001	<0.0001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05	<0.001	<0.001	<0.001	<0.001	-	-	-	-	0.001	0.001	<0.01
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	94	-	<0.01	-	-	<0.001	-	-	-	-	-	-	-	<0.0001	-	-	-	<0.001	-	<0.001	-	<0.001	-	<0.05	-	<0.001	-	<0.001	-	<0.0001	-	-	-	0.001	-
291703	6256950	Luddenham Road	SMGW-BH-B106	30-Jun-20	0.1	15,500	-	-	1580	-	-	3310	-	<0.01	-	-	961	0.96	0.02	-	<0.001	0.002	0.053	0.05	<0.001	<0.001	<0.05	<0.05	0.0004	0.0004	-	-	0.003	<0.001	0.24	0.23	0.009	0.003	12.8	10.6	0.002	<0.001	5.21	4.71	<0.0001	<0.0001	<0.001	<0.001	0.168	0.163	<0.01
291703	6256950	Luddenham Road	SMGW-BH-B106	31-Jul-20	0.08	13,700	-	-	1520	-	-	792	-	-	-	-	729	1.5	<0.01	-	<0.001	<0.001	0.071	0.048	<0.001	<0.001	<0.05	<0.05	0.0008	0.0007	-	-	0.002	<0.001	0.177	0.172	0.009	0.006	2.29	0.62	0.001	<0.001	3.48	3.28	<0.0001	<0.0001	0.001	<0.001	0.128	0.128	<0.01
291703	6256950	Luddenham Road	SMGW-BH-B106	26-Aug-20	-	14,200	-	-	1550	-	-	3100	-	-	-	-	892	2.38	0.01	-	0.001	<0.001	0.055	0.041	<0.001	<0.001	<0.05	<0.05	0.0004	0.0004	-	-	0.004	<0.001	0.282	0.258	0.014	0.008	16	13.2	0.004	<0.001	4.86	4.95	<0.0001	<0.0001	<0.001	<0.001	0.195	0.175	<0.01
291703	6256950	Luddenham Road	SMGW-BH-B106	15-Feb-21	0.08	15,700	-	-	1650	-	-	560	-	<0.01	-	-	1000	2.94	0.09	-	0.001	<0.001	0.074	0.045	0.001	0.001	<0.05	<0.05	0.0005	0.0003	-	-	0.004	<0.001	0.294	0.327	0.03	0.001	22.4	17.5	0.004	<0.001	5.42	5.17	<0.0001	<0.0001	<0.001	<0.001	0.208	0.223	<0.01
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	-	-	-	200	-	-	<20	-	-	<0.05	<0.05	1300	-	-	-	-	0.002	0.001	0.08	0.06	0.003	0.002	<0.05	<0.05	<0.0002	-	-	-	0.001	<0.001	0.4	0.37	-	-	-	-	0.004	-	2.8	3.6	0.0007	<0.0001	<0.005	<0.005	0.14	0.13	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	-	-	-	850	-	-	19	-	-	-	<0.005	-	1500	-	-	-	0.002	0.001	0.088	0.063	0.003	0.003	0.02	0.02	0.0002	-	-	-	0.003	0.001	0.6	0.54	-	-	-	-	0.006	-	4	5.4	<0.00005	<0.00005	<0.001	<0.001	0.2	0.19	<0.001
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	-	-	-	200	-	-	22	-	-	<0.05	<0.05	1300	-	-	-	-	0.001	0.001	0.07	0.06	0.002	0.002	<0.05	<0.05	<0.0002	-	-	-	0.001	<0.001	0.39	0.38	-	-	-	-	0.004	-	2.8	3.7	-	<0.0001	<0.005	<0.005	0.14	0.13	-
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	-	-	-	532	-	-	-	-	-	<0.01	-	361	-	<0.01	<0.01	-	0.002	0.002	-	-	-	-	-	-	<0.0001	<0.0001	-	-	<0.001	<0.001	0.028	0.028	<0.001	<0.001	0.29	0.29	<0.001	<0.001	0.596	0.596	-	-	-	-	0.026	0.026	<0.01
291728	6258996	Orchard Hills	SMGW-BH-A017	18-Dec-19	-	-	14,700	951	-	-	-	133	-	<0.01	-	665	-	<0.7	<0.01	-	0.004	0.004	0.202	0.198	<0.001	<0.001	<0.05	0.06	<0.0001	<0.0001	-	-	<0.001	<0.001	0.046	0.045	<0.005	<0.001	2.49	2.15	<0.001	<0.001	1.08	1.09	<0.0001	<0.0001	0.003	0.002	0.025	0.024	<0.01
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Jan-20	-	-	17,300	936	-	-	-	9	-	<0.01	-	681	-	<0.08	<0.01	-	0.003	0.005	0.115	0.123	<0.001	<0.001	0.06	0.07	<0.0001	<0.0001	-	-	<0.001	<0.001	0.027	0.029	<0.001	<0.001	1.93	2.29	<0.002	<0.001	0.787	0.803	<0.0001	<0.0001	0.002	0.002	0.015	0.014	<0.01
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Apr-20	-	-	875	95	-	-	-	18	-	0.07	-	35	-	0.51	0.12	-	0.001	0.001	0.05	0.038	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.006	0.005	0.006	0.003	0.96	0.63	<0.001	<0.001	0.124	0.109	<0.0001	<0.0001	0.003	0.003	0.008	0.007	<0.01
291728	6258996	Orchard Hills	SMGW-BH-A017	25-Aug-20	0.5	1060	-	-	99	-	-	-	-	0.06	-	-	83	2.93	0.28	-	0.003	0.002	0.069	0.044	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.004	0.001	0.017	0.011	0.012	0.003	4.47	1.3	0.005	<0.001	0.395	0.25	<0.0001	<0.0001	0.002	0.001	0.012	0.006	<0.01
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	-	-	-	-	532	-	607	-	-	<0.01	-	-	631	-	<0.01	-	-	0.002	-	-	-	-	-	-	-	<0.0001	-	-	-	<0.001	-	0.028	-	<0.001	-	0.29	-	<0.001	-	0.596	-	<0.0001	-	-	-	0.026	-
291737	6259192	Orchard Hills	SMGW-BH-A310	21-Apr-21	-	-	-	1400	-	-	390	-	-	0.02	<0.05	1100	-	-	-	-	-	0.003	-	0.1	-	<0.001	-	0.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

					Inorganics										Organic	Metals																																				
					Total Phosphorus as P (Organic Phosphate as P)	Total Dissolved Solids @180oC	Total Dissolved Solids @180oC (Filtered)	Sulfate as SO4	Sulfate as SO4 (Filtered)	TKN (as N)	Alkalinity (Bicarbonate as CaCO3)	Total Suspended Solids (TSS)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Methane	Magnesium	Magnesium (Filtered)	Aluminium	Aluminium (Filtered)	Arsenic III	Arsenic	Arsenic (Filtered)	Barium	Barium (Filtered)	Beryllium	Beryllium (Filtered)	Boron	Boron (Filtered)	Cadmium	Cadmium (Filtered)	Chromium (hexavalent)	Chromium (hexavalent) (Filtered)	Chromium (III+VI)	Chromium (III+VI) (Filtered)	Cobalt	Cobalt (Filtered)	Copper	Copper (Filtered)	Iron	Iron (Filtered)	Lead	Lead (Filtered)	Manganese	Manganese (Filtered)	Mercury	Mercury (Filtered)	Molybdenum	Molybdenum (Filtered)	Nickel	Nickel (Filtered)	Selenium
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									1		1			0.01	0.01		1		0.01			0.001								0.0001		0.01		0.001		0.001		0.001		0.05		0.001		0.001		0.0001				0.001	
Airport Regulations - Water pollution - accepted limits - fresh water																		0.1	0.1		0.05	0.05			0.004	0.004			0.0002	0.0002			0.01	0.01			0.002	0.002	1	1	0.001	0.001			0.0001	0.0001			0.015	0.015	0.005
ANZG (2018) Freshwater 95% toxicant DGVs																		0.055	0.055	0.024							0.37	0.37	0.0002	0.0002	0.0004	0.0004					0.0014	0.0014			0.0034	0.0034	1.9	1.9	0.0006	0.0006			0.011	0.011	0.011
ANZG (2018) Freshwater 99% toxicant DGVs																		0.027	0.027	0.001							0.09	0.09	0.00006	0.00006	0.00001	0.00001					0.001	0.001			0.001	0.001	1.2	1.2	0.00006	0.00006			0.008	0.008	0.005
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
291737	6259191	Orchard Hills	SMGW-BH-A310S	26-Apr-21	-	-	-	430	-	-	<20	-	-	<0.05	<0.05	1000	-	-	-	-	0.001	0.001	0.05	0.05	0.003	0.003	<0.05	<0.05	-	-	-	-	0.008	<0.001	0.94	0.87	-	-	-	-	-	-	43	43	0.018	<0.0001	<0.005	<0.005	0.27	0.24	-
291738	6248976	WSI	WSA GW19	28-Mar-17	-	-	-	-	-	-	-	-	0.05	-	-	-	-	-	-	-	-	0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.15	-
291738	6248976	WSI	WSA GW19	14-Jun-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	04-Oct-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.0005	-	<0.001	-	-	-	-	-	-	-	0.0005	-	-	-	<0.001	-	-	-	0.009	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.2	-
291738	6248976	WSI	WSA GW19	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	19-Apr-18	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	0.001	-	-	-	-	-	-	-	0.0002	-	-	-	<0.001	-	-	-	0.017	-	-	-	0.002	-	-	-	<0.0001	-	-	-	0.19	-
291738	6248976	WSI	WSA GW19	03-Jul-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.023	-	-	-	0.002	-	-	-	<0.0001	-	-	-	0.12	-
291738	6248976	WSI	WSA GW19	07-Sep-18	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	<0.002	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.087	-	-	-	0.008	-	-	-	<0.0001	-	-	-	0.11	-
291738	6248976	WSI	WSA GW19	14-Dec-18	-	-	-	-	-	-	-	-	0.46	-	-	-	-	-	-	<0.001	-	<0.001	-	-	-	-	-	-	-	0.0003	-	-	-	<0.001	-	-	-	0.013	-	-	-	0.001	-	-	-	<0.0001	-	-	-	0.19	-
291738	6259051	Orchard Hills	SMGW-BH-A311	11-May-21	-	-	-	1200	-	-	120	-	-	0.02	<0.05	980	-	-	<0.05	-	0.003	0.002	0.07	0.05	<0.001	<0.001	<0.05	<0.05	<0.0002	<0.0002	-	-	0.001	<0.001	0.23	0.22	-	-	-	-	-	<0.001	6.9	7.3	<0.0001	<0.0001	<0.005	<0.005	0.12	0.1	0.002
291769	6260026	Northern Tunnels	SMGW-BH-A123	28-May-20	0.11	15,100	-	-	877	-	-	32	-	<0.01	-	-	493	0.07	<0.01	-	0.002	0.002	0.178	0.106	<0.001	<0.001	0.1	0.07	<0.0001	<0.0001	-	-	0.002	<0.001	0.006	0.005	<0.001	<0.001	2.31	2.26	<0.001	<0.001	0.47	0.467	<0.0001	<0.0001	0.003	0.002	0.003	0.003	<0.01
291769	6260026	Northern Tunnels	SMGW-BH-A123	01-Jul-20	0.06	15,000	-	-	955	-	-	15	-	<0.01	-	-	403	0.04	<0.01	-	0.004	0.002	0.092	0.074	<0.001	<0.001	0.22	0.22	<0.0001	<0.0001	-	-	<0.001	<0.001	0.005	0.004	<0.001	<0.001	1.02	0.8	<0.001	<0.001	1.04	0.938	<0.0001	<0.0001	0.01	0.004	0.004	0.002	<0.01
291769	6260026	Northern Tunnels	SMGW-BH-A123	30-Jul-20	<0.05	14,000	-	-	1370	-	-	20	-	<0.01	-	-	402	0.09	<0.01	-	0.003	0.002	0.125	0.076	<0.001	<0.001	0.16	0.21	<0.0001	<0.0001	-	-	0.001	<0.001	0.005	0.003	<0.001	<0.001	1.05	0.93	<0.001	<0.001	1.02	1.1	<0.0001	<0.0001	0.008	0.003	0.006	0.003	<0.01
291769	6260026	Northern Tunnels	SMGW-BH-A123	20-Aug-20	<0.02	14,200	-	-	1380	-	-	10	-	<0.01	-	-	371	0.05	<0.01	-	0.002	0.002	0.08	0.073	<0.001	<0.001	0.15	0.14	<0.0001	<0.0001	-	-	<0.001	<0.001	0.005	0.004	<0.001	0.002	1.4	1.1	<0.001	<0.001	1.12	1.01	<0.0001	<0.0001	0.006	0.003	0.009	0.003	<0.01
291769	6260026	Northern Tunnels	SMGW-BH-A123	17-Feb-21	0.05	14,900	-	-	1120	-	-	456	-	<0.01	-	-	456	0.52	<0.01	-	0.002	0.001	0.286	0.113	<0.001	<0.001	0.14	0.12	0.0001	<0.0001	-	-	0.002	<0.001	0.004	0.001	0.004	<0.001	2.8	2.1	0.001	<0.001	1.57	1.49	<0.0001	<0.0001	0.004	0.004	0.005	0.003	<0.01
291786	6259594	Orchard Hills	SMGW-BH-A113	27-May-20	0.05	16,100	-	-	137	-	-	20	-	-	5.01	-	548	0.07	<0.01	-	<0.001	<0.001	3.98	0.971	<0.001	<0.001	0.06	<0.05	<0.0001	<0.0001	-	-	0.003	<0.001	0.004	0.003	0.052	0.01	2.54	1.93	<0.001	<0.001	0.8	0.851	<0.0001	<0.0001	0.002	<0.001	0.076	0.084	<0.01
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jun-20	0.07	18,700	-	-	257	-	-	10	-	<0.01	-	-	553	0.08	<0.01	-	<0.001	0.001	1.09	0.613	<0.001	<0.001	0.1	0.1	<0.0001	<0.0001	-	-	0.003	<0.001	0.001	<0.001	0.056	0.001	2.12	1.59	<0.001	<0.001	1.06	1	<0.0001	<0.0001	0.003	<0.001	0.067	0.002	<0.01
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jul-20	<0.05	16,200	-	-	202	-	-	22	-	<0.01	-	-	555	0.09	0.04	-	<0.001	0.002	1.72	0.965	<0.001	<0.001	0.1	0.13	<0.0001	<0.0001	-	-	0.002	<0.001	0.001	<0.001	0.057	<0.001	1.58	0.4	<0.001	<0.001	1.03	1	<0.0001	<0.0001	0.002	<0.001	0.045	<0.001	<0.01
291786	6259594	Orchard Hills	SMGW-BH-A113	25-Aug-20	0.08	16,400	-	-	310	-	-	-	-	<0.01	-	-	513	0.2	<0.01	-	<0.001	<0.001	3.02	0.972	<0.001	<0.001	0.08	0.08	<0.0001	<0.0001	-	-	0.005	<0.001	0.002	<0.001	0.19	<0.001	2.42	0.55	<0.001	<0.001	1.11	0.98	<0.0001	<0.0001	0.006	<0.001	0.095	0.003	<0.01
291786	6259594	Orchard Hills	SMGW-BH-A113	27-Nov-20	<0.05	18,600	-	-	197	-	-	25	-	<0.01	-	-	545	<0.01	0.11	-	<0.001	<0.001	1.49	0.938	<0.001	<0.001	0.07	0.12	<0.0001	<0.0001	-	-	<0.001	0.003	0.002	0.003	<0.001	0.002	3.57	5.48	<0.001	<0.001	0.994	0.999	<0.0001	<0.0001	<0.001	<0.001	0.012	0.04	<0.01
291786	6259594	Orchard Hills	SMGW-BH-A113	15-Feb-21	<0.05	18,800	-	-	257	-	-	53	-	<0.01	-	-	614	0.18	<0.01	-	0.001	<0.001	3.33	2.13	<0.001	<0.001	0.07	0.08	<0.0001	<0.0001	-	-	0.004	<0.001	0.002	<0.001	0.397	<0.001	6.04	3.7	<0.001	<0.001	0.706	0.671	<0.0001	<0.0001	0.004	0.002	0.099	0.002	<0.01
291836	6257203	Luddenham Road	SMGW-BH-B309	02-Mar-21	<0.01	-	-	-	249	-	-	-	-	<0.01	<0.01	-	46	0.08	<0.01	-	<0.001	0.001	0.055	0.054	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.002	0.001	0.012	0.011	<0.001	<0.001	5.19	4.8	<0.001	<0.001	0.275	0.278	<0.0001	<0.0001	<0.001	0.003	0.011	0.01	<0.01
291848	6248251	WSI	SMGW-BH-C341	20-Apr-21	-	-	-	690	-	-	160	-	-	-	<0.05	150	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	0.002	-	0.022	-	<0.001	-	0.88	-	<0.001	-	1.2	-	-	-	-	-	0.014	-
291855	6258838	Orchard Hills	SMGW-BH-A117	26-May-20	<0.1	23,900	-	-	821	-	-	-	-	<0.1	-	-	1100	0.99	<0.01	-	0.003	0.002	0.449	0.158	0.003	0.002	<0.05	<0.05	<0.0001	<0.0001	-	-	0.003	<0.001	0.555	0.511	0.005	<0.001	113	115	0.002	<0.001	0.692	0.669	<0.0001	<0.0001	0.004	<0.001	0.18	0.166	<0.01
291855	6258838	Orchard Hills	SMGW-BH-A117	29-Jun-20	0.21	21,400	-	-	1010	-	-	-	-	<0.1	-	-	1050	1.31	0.11	-	0.004	0.004	0.25	0.118	0.004	0.003	<0.05	<0.05	<0.0001	<0.0001	-	-	0.002	<0.001	0.482	0.448	0.007	0.004	106	104	<0.001	<0.001	0.578	0.54	<0.0001	<0.0001	0.002	0.001	0.16	0.142	<0.01
291855	6258838	Orchard Hills	SMGW-BH-A117	25-Aug-20	0.12	22,400	-	-	834	-	-	-	-	<0.01	-	-	990	1.02	0.04	-	0.002	0.002	0.125	0.1	0.002	0.002	<0.05	<0.05	<0.0001	<0.0001	-	-	0.002	<0.001	0.473	0.441	<0.001	<0.001	105	88.7	<0.001	<0.001	0.46	0.384	<0.0001	<0.0001	0.001	<0.001	0.161	0.144	<0.01
291855	6258838	Orchard Hills	SMGW-BH-A117	17-Feb-21	<0.05	20,800	-	-	629	-	-	82	-	<0.01	-	-	964	2.17	0.52	-	0.004	0.003	0.138	0.13	0.009	0.006	<0.05	<0.05	0.0002	0.0001	-	-	0.001	<0.001	0.617	0.647	0.002	<0.001	80	66.8	0.006	0.001	0.35	0.32	<0.0001	<0.0001	<0.001	<0.001	0.213	0.213	0.03
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-May-20	<0.05	19,800	-	-	679	-	-	19	-	<0.01	-	-	1270	1.99	2.36	-	0.003	0.003	0.103	0.089	0.012	0.015	<0.05	<0.05	0.0003	0.0002	-	-	0.003	0.005	0.629	0.719	0.016	0.011	62.1	85	0.025	0.021	0.636	0.755	<0.0001	<0.0001	<0.001	<0.001	0.235	0.27	0.01
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jun-20	0.08	17,900	-	-	632	-	-	-	-	<0.01	-	-	1050	1.58	1.51	-	0.003	0.004	0.088	0.082	0.008	0.007	<0.05	<0.05	0.0003	0.0004	-	-	0.001	0.001	0.544	0.504	0.012	0.011	22.8	18.3	0.014	0.013	0.489	0.473	<0.0001	<0.0001	<0.001	<0.001	0.211	0.189	<0.01
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jul-20	0.1	21,700	-	-	624	-	-	21	-	<0.01	-	-	1100	2.33	2	-	0.003	0.002	0.093	0.08	0.012	0.01	<0.05	<0.05	0.0003	0.0003	-	-	0.002	<0.001	0.858	0.527	0.034	0.024	28.4	25.6	0.016	0.014	0.506	0.451	<0.0001	<0.0001	<0.001	<0.001	0.249	0.209	0.01
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-Aug-20	<0.05	19,400	-	-	526	-	-	6	-	<0.01	-	-	1020	1.87	1.74	-	0.003	0.003	0.11	0.084	0.011	0.01	<0.05	<0.05	0.0003	0.0002	-	-	<0.001	<0.001	0.638	0.635	0.017	0.016	33.4	30.8	0.013	0.013	0.67	0.48	<0.0001	<0.0001	<0.001	<0.001	0.232	0.238	0.01
291857	6258838	Orchard Hills	SMGW-BH-A117S	23-Feb-21	0.06	19,300	-	-	680	-	-	<5	-	<0.01	-	-	1210	1.33	1.3	-	0.004	0.003	0.076	0.073	0.01	0.01	<0.05	<0.05	0.0002	0.0003	-	-	0.003	0.002	0.76	0.734	0.001	<0.001	97	98.9	0.004	0.002	0.737	0.804	<0.0001	<0.0001	<0.001	<0.001	0.293	0.278	0.03
291893	6260308	Northern Tunnels	SMGW-BH-A122	26-May-20	<0.02	8030	-	-	64	-	-	-	-	<0.01	-	-	2	0.22	0.02	-	<0.001	<0.001	2.84	2.78	<0.001	<0.001	<0.05	<0.05	0.0002	0.0001	-	-	0.142	0.014	0.008	0.007	0.018	<0.001	0.36	<0.05	0.002	<0.001	0.007	<0.001	<0.0001	<0.0001	0.234	0.187	0.01	0.013	<0.01
291893	6260308	Northern Tunnels	SMGW-BH-A122	30-Jun-20	0.02	11,100	-	-	46	-	-	62	-	<0.01	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	20-Aug-20	<0.02	8530	-	-	25	-	-	62	-	<0.01	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	17-Feb-21	<0.05	23,700	-	-	145	-	-	44	-	<0.01	-	-	2	0.08	<0.01	-	0.001	<0.001	1.64	1.61	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.02	<0.001	<0.001	<0.001	0.009	<0.001	0.34	<0.05	<0.001	<0.001	0.004	<0.001	<0.0001	<0.0001	0.124	0.094	0.004	0.004	<0.01
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jun-20	<0.1	19,500	-	-	16	-	-	28	-	<0.1	-	-	522	0.18	<0.01	-	0.003	0.003	60.1	47.2	<0.001	<0.001	0.1	0.1	<0.0001	<0.0001	-	-	<0.001	<0.001	0.004	0.001	0.001	0.001	4.4	2.55	<0.001	<0.001	0.921	0.862	<0.0001	<0.0001	0.003	<0.001	0.004	0.003	<0.01
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jul-20	<0.05	16,300	-	-	44	-	-	130	-	0.02	-	-	493	0.49	0.02	-	0.002	0.002	19.5	16.3	<0.001	<0.001	0.15	0.17	<0.0001	<0.0001	-	-	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	2.5	1.6	<0.001	<0.001	0.787	0.748	<0.0001	<0.0001	0.002	<0.001	0.002	<0.001	<0.01
291915	6260719	Northern Tunnels	SMGW-BH-A111	20-Aug-20	<0.05	17,300	-	-	64	-	-	18	-	0.03	-	-	502	0.12	0.03	-	0.002	0.001	24.5	8.87	<0.001	<0.001	0.1	0.09	<0.0001	<0.0001	-	-	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	3.09	2.86	<0.001	<0.001	0.796	0.697	<0.0001	<0.0001	0.002	<0.001	0.002	0.002	<0.01
291915	6260719	Northern Tunnels	SMGW-BH-A111	17-Feb-21	<0.05	18,800	-	-	26	-	-	15	-	<0.01	-	-	605	0.01	<0.01	-	0.001	<0.001	10.8	11.3	<0.001	<0.001	0.07	0.06	<0.0001	<0.0001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	2.48	2.13	<0.001	<0.001	0.648	0.625	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.01
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jun-20	0.09	21,300	-	-	930	-	-	36	-	<0.01	-	-	1090	0.87	<0.01	-	0.001	0.002	0.102	0.092	<0.001	<0.001	0.06	0.06	<0.0001	<0.0001	-	-	0.002	<0.001	0.001	<0.001	0.004	<0.001	3.25	2.11	0.001	<0.001	0.591	0.572	<0.0001	<0.0001	<0.001	<0.001	0.002	0.002	<0.01
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jul-20	0.03	4600	-	-	337	-	-	18	-	<0.01	-	-	334	0.58	0.03	-	<0.001	<0.001	0.045	0.045	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	<0.001	<0.001	0.002	0.001	0.94	0.64	<0.001	<0.001	0.198	0.213	<0.0001	<0.0001	<0.001	<0.001	0.001	0.001	<0.01
291944	6260883	Northern Tunnels	SMGW-BH-A121	20-Aug-20	0.03	4110	-	-	429	-	-	12	-	<0.01	-	-	260	0.41	<0.01	-	0.002	0.002	0.134	0.123	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.004	0.004	0.003	0.002	0.69	0.15	<0.001	<0.001	0.547	0.455	<0.0001	<0.0001	0.001	0.001	0.003	0.003	<0.01
291944	6260883	Northern Tunnels	SMGW-BH-A121	17-Feb-21	<0.05	2880	-	-	392	-	-	25	-	<0.01	-	-	94	0.52	<0.01	-	0.001	<0.001	0.082	0.051	<0.001	<0.001	0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	<0.001	<0.001	0.004	0.007	1.98	0.12	<0.001	<0.001	0.386	0.057	<0.0001	<0.0001	0.001	<0.001	0.002	0.002	<0.01
291953	6260516	Northern Tunnels	SMGW-BH-A019	06-Sep-19	-	-	-	<1	<1	-	<1	-	-	<0.05	0.046	1	1	0.24	0.24	-	<0.001	<0.001	-	-	-	-	-	-	<0.0001	<0.0001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05	<0.001	<0.001	0.002	0.002	-	0.0001	-	-	0.007	0.007	0.01
292033	6257200	Luddenham Road	SMGW-BH-B308	02-Mar-21	0.42	-	-	-	262	-	-	-	-	0.07	-	-	153	0.95	0.1	-	0.002	0.002	0.137	0.129	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.002	<0.001	0.091	0.084	<0.001	<0.001	12.8	9.78	0.003	<0.001	1.1	0.988	<0.0001	<0.0001	<0.001	<0.001	0.031	0.031	<0.01
292037	6261297	Claremont Meadow	SMGW-BH-A109S	26-May-20	0.03	671	-	-	237	-	-	-	-	0.02	-	-	4	0.32	0.05	-	0.002	0.002	0.102	0.076	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.002	0.002	<0.001	<0.001	0.006	0.004	0.42	<0.05	<0.001	<0.001	0.054	0.006	<0.0001	<0.0001	0.014	0.01	0.001	0.004	<0.01
292037	6261297	Claremont Meadow	SMGW-BH-A109S	30-Jun-20	0.07	677	-	-	169	-	-	68	-	0.03	-	-	9	0.62	0.03	-	0.002	0.001	0.117	0.078	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.001	<0.001	0.002	<0.001	0.004	0.002	0.87	<0.05	<0.001	<0.001	0.326	0.17	<0.0001	<0.0001	0.005	0.004	0.003	0.002	<0.01
292037	6261297	Claremont Meadow	SMGW-BH-A109S	25-Aug-20	0.03	821	-	-	141	-	-	26	-	0.02	-	-	20	0.35	<0.01	-	<0.001	<0.001	0.172	0.154	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.009	0.004	0.002	0.006	0.59	<0.05	<0.001	<0.001	1.71	1.43	<0.0001	<0.0001	0.004	0.004	0.006	0.005	<0.01
292037	6261297	Claremont Meadow	SMGW-BH-A109S	17-Feb-21	0.52	638	-	-	160	-	-	18	-	0.17	-	-	11	0.87	0.01	-	0.004	0.003	0.088	0.066	<0.001	<0.001	0.09	0.07	0.0001	<0.0001	-	-	0.003	<0.001	0.006	0.002	0.021	0.014	1.31	0.06	0.003	<0.001	0.334	0.209	<0.0001	<0.0001	0.012	0.01	0.005	0.003	<0.01
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	-	-	-	-	-	-	-	-	-	0.04	-	-	-	-	0.05 - 0.0	-	012 - 0.0	011 - 0.0	.16 - 0.2	.17 - 0.1	<0.0005	<0.0005	.05 - 0.0	.06 - 0.0	<0.0001	<0.0001	-	-	001 - 0.0	001 - 0.0	003 - 0.0	0.003	<0.001	<0.001	-	-	<0.001	<0.001	.61 - 0.6	.59 - 0.6	<0.00005	<0.00005	012 - 0.0	0.013	001 - 0.0	001 - 0.0	<0.001
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	0.014	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	0.001	-	<0.001	-	-	-	<0.001	-	0.72	-	<0.00001	-	-	-	0.001	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	-	-	-	380	-	0.9	650	38	-	<0.01	<0.05	470	-	0.31	<0.05	-	0.016	0.017	0.25	0.18	<0.001	<0.001	0.07	0.1	<0.0002	<0.0002	-	-	0.002	<0.001	0.005	0.003	0.002	0.002	4.8	4.1	0.003	0.002	0.67	0.57	<0.0001	<0.0001	0.018	0.013	0.002	0.003	<0.001
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	-	-	-	-	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	0.014	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	0.001	-	<0.001	-	4.6	-	<0.001	-	0.72	-	<0.00001	-	-	-	0.001	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	26-May-20	0.04	11,100	-	-	5	-	-	-	-	0.04	-	-	320	0.49	<0.01	-	0.001	0.001	7.08	12.2	<0.001	<0.001	<0.05	0.05	<0.0001	<0.0001	-	-	0.025	<0.001	0.002	0.002	0.003	<0.001	2.18	1.59	<0.001	<0.001	0.411	0.223	<0.0001	<0.0001	0.004	0.005	0.002	0.002	<0.01
292038	6261300	Claremont Meadow	SMGW-BH-A109	30-Jun-20	0.06	11,100	-	-	<1	-	-	28	-	0.05	-	-	372	0.64	<0.01	-	<0.001	0.002	13.2	12	<0.001	<0.001	<0.05	0.07	<0.0001	<0.0001	-	-	0.001	<0.001	0.002	<0.001	0.002	0.001	3.42	1.46	0.002	<0.001	0.419	0.384	<0.0001	<0.0001	0.001	<0.001	0.002	<0.001	<0.01
292038	6261300	Claremont Meadow	SMGW-BH-A109	25-Aug-20	0.06	10,800	-	-	20	-	-	32	-	0.04	-	-	395	1.21	<0.01	-	0.002	<0.001	12.6	12.5	<0.001	<0.001	0.05	0.06	<0.0001	<0.0001	-	-	0.002	<0.001	0.004	0.003	0.002	<0.001	4.74	2.54	0.002	<0.001	0.207	0.199	<0.0001	<0.0001	0.004	0.003	0.002	<0.001	<0.01
292038	6261300	Claremont Meadow	SMGW-BH-A109	17-Feb-21	0.05	12,200	-	-	11	-	-	16	-	0.04	-	-	379	1.36	<0.01	-	0.002	<0.001	18	16.5	<0.001	<0.001	0.06	<0.05	<0.0001	<0.0001	-	-	0.003	<0.001	0.003	0.001	0.006	<0.001	5.2	2.8	0.003	<0.001	0.17	0.152	<0.0001	<0.0001	0.005	<0.001	0.002	<0.001	<0.01
292130	6249000	WSI	WSA GW20	28-Mar-17	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	0.008	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.002	-
292130	6249000	WSI	WSA GW20	14-Jun-17	-	-	-	-	-	-	-	-	13	-	-	-	-	-	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	04-Oct-17	-	-	-	-	-	-	-	-	5.9	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.002	-	-	-	<0.001	-	-	-	0.0001	-	-	-	0.006	-
292130	6249000	WSI	WSA GW20	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	19-Dec-17	-	-	-	-	-	-	-	-	8.6	-	-	-	-	-	-	<0.0005	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.003	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.003	-
292130	6249000	WSI	WSA GW20	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	18-Apr-18	-	-	-	-	-	-	-	-	1.6	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.043	-	-	-	0.003	-	-	-	<0.0001	-	-	-	0.061	-

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

					Inorganics										Organic	Metals																																				
					Total Phosphorus as P (Organic Phosphate as P)	Total Dissolved Solids @180oC	Total Dissolved Solids @180oC (Filtered)	Sulfate as SO4	Sulfate as SO4 (Filtered)	TKN (as N)	Alkalinity (Bicarbonate as CaCO3)	Total Suspended Solids (TSS)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Methane	Magnesium	Magnesium (Filtered)	Aluminium	Aluminium (Filtered)	Arsenic III	Arsenic	Arsenic (Filtered)	Barium	Barium (Filtered)	Beryllium	Beryllium (Filtered)	Boron	Boron (Filtered)	Cadmium	Cadmium (Filtered)	Chromium (hexavalent)	Chromium (hexavalent) (Filtered)	Chromium (III+VI)	Chromium (III+VI) (Filtered)	Cobalt	Cobalt (Filtered)	Copper	Copper (Filtered)	Iron	Iron (Filtered)	Lead	Lead (Filtered)	Manganese	Manganese (Filtered)	Mercury	Mercury (Filtered)	Molybdenum	Molybdenum (Filtered)	Nickel	Nickel (Filtered)	Selenium
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									1		1			0.01	0.01		1		0.01			0.001								0.0001		0.01		0.001		0.001		0.001		0.05		0.001		0.001		0.0001				0.001	
Airport Regulations - Water pollution - accepted limits - fresh water																		0.1	0.1		0.05	0.05			0.004	0.004			0.0002	0.0002			0.01	0.01			0.002	0.002	1	1	0.001	0.001			0.0001	0.0001			0.015	0.015	0.005
ANZG (2018) Freshwater 95% toxicant DGVs																		0.055	0.055	0.024							0.37	0.37	0.0002	0.0002	0.0004	0.0004					0.0014	0.0014			0.0034	0.0034	1.9	1.9	0.0006	0.0006			0.011	0.011	0.011
ANZG (2018) Freshwater 99% toxicant DGVs																		0.027	0.027	0.001							0.09	0.09	0.00006	0.00006	0.00001	0.00001					0.001	0.001			0.001	0.001	1.2	1.2	0.00006	0.00006			0.008	0.008	0.005
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
292130	6249000	WSI	WSA GW20	03-Jul-18	-	-	-	-	-	-	-	-	0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.015	-	-	-	0.001	-	-	-	<0.0001	-	-	-	0.014	-
292130	6249000	WSI	WSA GW20	05-Sep-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	0.002	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.02	-	-	-	0.001	-	-	-	<0.0001	-	-	-	0.025	-
292130	6249000	WSI	WSA GW20	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Dec-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	0.004	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.022	-	-	-	0.002	-	-	-	<0.0001	-	-	-	0.019	-
292130	6249000	WSI	WSA GW20	03-Apr-19	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	0.005	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.01	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.015	-
292130	6249000	WSI	WSA GW20	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	28-Mar-17	-	-	-	-	-	-	-	-	0.32	-	-	-	-	-	-	<0.0001	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	<0.001	-
292130	6249000	WSI	WSA GW21	14-Jun-17	-	-	-	-	-	-	-	-	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	04-Oct-17	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.004	-
292130	6249000	WSI	WSA GW21	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	19-Dec-17	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	<0.0005	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	<0.001	-
292130	6249000	WSI	WSA GW21	21-Dec-17	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.0001	-	-	-	0.004	-
292130	6249000	WSI	WSA GW21	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	18-Apr-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	0.002	-	-	-	0.022	-	-	-	0.002	-	-	-	<0.0001	-	-	-	0.007	-
292130	6249000	WSI	WSA GW21	03-Jul-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.023	-	-	-	<0.002	-	-	-	<0.0001	-	-	-	<0.005	-
292130	6249000	WSI	WSA GW21	05-Sep-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.021	-	-	-	0.002	-	-	-	<0.0001	-	-	-	0.006	-
292130	6249000	WSI	WSA GW21	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Dec-18	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.018	-	-	-	0.002	-	-	-	<0.0001	-	-	-	0.009	-
292130	6249000	WSI	WSA GW21	03-Apr-19	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	0.001	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.001	-	-	-	0.026	-	-	-	0.002	-	-	-	<0.0001	-	-	-	0.008	-
292130	6249000	WSI	WSA GW21	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	26-May-20	<0.1	12,000	-	-	<1	-	-	-	-	0.08	-	-	388	0.21	<0.01	-	0.003	0.003	46.7	52.5	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.01	0.011	<0.001	<0.001	5.75	5.7	<0.001	<0.001	0.456	0.452	<0.0001	<0.0001	0.002	<0.001	0.001	<0.001	<0.01
292413	6261713	Northern Tunnels	SMGW-BH-A107	29-Jun-20	0.31	11,300	-	-	2	-	-	-	-	0.22	-	-	363	0.34	<0.01	-	0.002	0.003	45.5	41.4	<0.001	<0.001	0.05	0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.007	0.006	0.002	0.002	6.4	4.56	0.001	<0.001	0.399	0.372	<0.0001	<0.0001	<0.001	<0.001	0.002	<0.001	<0.01
292413	6261713	Northern Tunnels	SMGW-BH-A107	25-Aug-20	0.16	12,800	-	-	3	-	-	28	-	0.13	-	-	298	0.35	<0.01	-	0.004	0.002	55	43.7	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.006	0.004	<0.001	<0.001	5.64	3.97	<0.001	<0.001	0.26	0.218	<0.0001	<0.0001	0.001	<0.001	0.002	<0.001	<0.01
292413	6261713	Northern Tunnels	SMGW-BH-A107	16-Feb-21	0.16	11,900	-	-	-	-	-	22	-	0.12	-	-	367	0.13	-	-	0.004	0.002	67	37.4	-	-	0.07	-	-	-	-	-	-	-	0.005	0.004	-	-	4.97	3.36	-	-	0.216	0.194	-	-	-	0.002	-	0.004	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-May-20	<0.02	7040	-	-	331	-	-	<5	-	<0.01	-	-	196	0.02	<0.01	-	<0.001	<0.001	0.109	0.096	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.006	0.005	<0.001	<0.001	0.17	<0.05	<0.001	<0.001	0.449	0.367	<0.0001	<0.0001	<0.001	<0.001	0.002	0.002	<0.01
292413	6261713	Northern Tunnels	SMGW-BH-A107S	29-Jun-20	<0.02	6750	-	-	317	-	-	-	-	<0.01	-	-	190	<0.01	<0.01	-	<0.001	<0.001	0.097	0.092	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.004	0.004	<0.001	<0.001	0.14	0.13	<0.001	<0.001	0.37	0.355	<0.0001	<0.0001	<0.001	<0.001	0.002	0.002	<0.01
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	<0.02	7540	-	-	318	-	-	5	-	<0.01	-	-	182	0.19	<0.01	-	<0.001	<0.001	0.078	0.07	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.004	0.004	<0.001	<0.001	0.7	0.22	<0.001	<0.001	0.344	0.315	<0.0001	<0.0001	<0.001	<0.001	0.002	0.002	<0.01
292413	6261713	Northern Tunnels	SMGW-BH-A107S	15-Feb-21	<0.02	8250	-	-	326	-	-	<5	-	<0.01	-	-	228	0.03	<0.01	-	<0.001	<0.001	0.05	0.049	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.002	0.001	<0.001	0.001	0.19	0.05	<0.001	<0.001	0.128	0.085	<0.0001	<0.0001	<0.001	<0.001	<0.001	0.001	<0.01
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	<0.02	7590	-	-	316	-	-	11	-	<0.01	-	-	175	0.29	<0.01	-	<0.001	<0.001	0.075	0.07	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.001	<0.001	0.004	0.004	<0.001	<0.001	0.86	0.2	<0.001	<0.001	0.351	0.306	<0.0001	<0.0001	<0.001	<0.001	0.002	0.002	<0.01
292892	6262062	Northern Tunnels	SMGW-BH-A011S	06-Sep-19	-	-	-	11	-	-	-	-	-	<0.01	-	69	-	0.02	0.02	-	0.001	0.001	-	-	-	-	-	-	<0.0001	<0.0001	-	-	<0.001	<0.001	0.149	0.149	<0.001	<0.001	9.37	9.37	<0.001	<0.001	6.41	6.41	-	-	-	-	0.007	0.007	<0.01
292892	6262062	Northern Tunnels	SMGW-BH-A011S	18-Dec-19	-	-	1430	10	-	-	-	195	-	<0.01	-	68	-	<2.19	<0.01	-	<0.001	<0.001	2.18	2.15	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.102	0.102	<0.001	<0.001	4.02	4.78	<0.001	<0.001	2.94	3.34	<0.0001	-	<0.001	<0.001	0.006	0.006	<0.01
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Jan-20	-	-	1550	10	-	-	-	44	-	<0.01	-	69	-	<0.83	<0.01	-	0.002	0.001	2.16	2.18	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.098	0.094	<0.001	<0.001	6	4.34	<0.002	<0.001	2.95	2.84	<0.0001	<0.0001	<0.001	<0.001	0.006	0.006	<0.01
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Apr-20	-	-	2310	8	-	-	-	58	-	<0.01	-	109	-	<0.95	<0.01	-	0.002	0.002	3.21	3.1	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.122	0.114	<0.004	<0.001	23.1	21	<0.001	<0.001	7.84	7.92	<0.0001	<0.0001	<0.001	<0.001	0.007	0.006	<0.01
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	0.87	1440	-	-	8	-	-	151	-	<0.01	-	-	64	2.17	0.01	-	0.004	0.004	1.07	1	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.003	<0.001	0.091	0.084	0.005	<0.001	16.8	13.4	0.002	<0.001	7.47	6.73	<0.0001	<0.0001	<0.001	<0.001	0.009	0.006	<0.01
292892	6262062	Northern Tunnels	SMGW-BH-A011S	05-Sep-19	-	-	-	-	11	-	80	-	-	<0.01	0.054	-	69	-	0.02	-	-	0.001	-	-	-	-	-	-	-	<0.0001	-	<0.01	-	<0.001	-	0.149	-	<0.001	-	9.37	-	<0.001	-	6.41	-	<0.0001	-	-	-	0.007	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	0.95	1410	-	-	8	-	-	166	-	<0.01	-	-	57	2.74	0.02	-	0.006	0.004	1.06	0.927	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.003	<0.001	0.091	0.078	0.008	<0.001	18.5	12	0.004	<0.001	7.5	6.19	<0.0001	<0.0001	<0.001	<0.001	0.009	0.006	<0.01
293098	6262002	Northern Tunnels	SMGW-BH-A105	26-May-20	0.04	4820	-	-	<10	-	-	-	-	0.05	-	-	170	0.38	<0.01	-	0.002	0.002	21.1	22	<0.001	<0.001	0.07	0.08	<0.0001	<0.0001	-	-	<0.001	<0.001	0.006	0.006	0.001	<0.001	5.24	4.82	<0.001	<0.001	0.3	0.278	<0.0001	<0.0001	0.002	0.001	0.003	0.006	<0.01
293098	6262002	Northern Tunnels	SMGW-BH-A105	01-Jul-20	0.13	4900	-	-	<1	-	-	166	-	0.06	-	-	156	0.58	<0.01	-	0.003	0.002	21.5	21.6	<0.001	<0.001	0.09	<0.05	<0.0001	<0.0001	-	-	0.001	<0.001	0.006	0.005	0.002	<0.001	4.86	3.53	0.001	<0.001	0.262	0.207	<0.0001	<0.0001	0.002	<0.001	0.005	0.003	<0.01
293098	6262002	Northern Tunnels	SMGW-BH-A105	25-Aug-20	0.08	4860	-	-	2	-	-	54	-	0.05	-	-	166	1.22	<0.01	-	0.002	0.002	24.2	22.4	<0.001	<0.001	0.14	0.07	<0.0001	<0.0001	-	-	0.002	<0.001	0.004	0.004	0.004	<0.001	5.07	3.82	0.002	<0.001	0.218	0.184	<0.0001	<0.0001	0.002	<0.001	0.005	0.003	<0.01
293098	6262002	Northern Tunnels	SMGW-BH-A105	16-Feb-21	0.19	5200	-	-	5	-	-	24	-	0.12	-	-	174	0.15	<0.01	-	0.001	0.001	28.3	23.3	<0.001	<0.001	0.08	0.07	<0.0001	<0.0001	-	-	<0.001	<0.001	0.003	0.003	<0.001	<0.001	3.36	2.82	<0.001	<0.001	0.149	0.149	<0.0001	<0.0001	<0.001	<0.001	0.017	0.012	<0.01
293100	6261999	Northern Tunnels	SMGW-BH-A105S	26-May-20	0.08	1370	-	-	31	-	-	-	-	<0.01	-	-	36	1.55	<0.01	-	0.002	0.001	0.213	0.196	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.003	<0.001	0.01	0.007	0.004	<0.001	4.88	0.77	0.002	<0.001	0.986	0.88	<0.0001	<0.0001	<0.001	<0.001	0.004	0.004	<0.01
293100	6261999	Northern Tunnels	SMGW-BH-A105S	25-Aug-20	0.14	1280	-	-	33	-	-	78	-	<0.01	-	-	36	1.72	<0.01	-	0.002	<0.001	0.14	0.139	<0.001	<0.001	0.13	<0.05	<0.0001	<0.0001	-	-	0.002	<0.001	0.005	0.004	0.002	<0.001	3.22	0.85	0.001	<0.001	0.453	0.532	<0.0001	<0.0001	<0.001	<0.001	0.002	0.001	<0.01
293100	6261999	Northern Tunnels	SMGW-BH-A105S	16-Feb-21	0.28	1250	-	-	38	-	-	66	-	<0.01	-	-	28	0.67	<0.01	-	0.001	<0.001	0.155	0.117	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.004	0.003	0.001	<0.001	2.5	1.02	0.002	<0.001	0.315	0.328	<0.0001	<0.0001	<0.001	<0.001	<0.001	0.001	<0.01
293937	6261970	St Marys	SMGW-BH-A202	02-Dec-20	0.02	316	-	-	16	-	-	52	-	<0.01	-	-	5	0.55	0.02	-	0.002	0.001	0.029	0.013	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.002	<0.001	<0.001	<0.001	0.01	0.004	0.41	<0.05	<0.001	<0.001	0.006	0.002	<0.0001	<0.0001	0.008	0.007	0.004	0.003	<0.01
293937	6261970	St Marys	SMGW-BH-A202	02-Mar-21	0.01	2580	-	-	130	-	-	34	-	<0.01	-	-	113	0.29	<0.01	-	0.002	<0.001	0.06	0.106	<0.001	<0.001	<0.05	<0.05	<0.0001	<0.0001	-	-	0.004	0.002	0.004	0.034	0.003	<0.001	1.42	5.36	<0.001	<0.001	0.127	0.215	<0.0001	<0.0001	0.007	<0.001	0.003	0.008	<0.01
293937	6261970	St Marys	SMGW-BH-A202	26-May-21	0.07	764	-	-	36	-	-	332	-	0.01	-	-	34	23.8	0.01	-	0.01	0.002	0.996	0.038	0.003	<0.001	0.08	<0.05	0.0002	<0.0001	-	-	0.012	<0.001	0.021	<0.001	0.026	<0.001	22.3	0.1	0.063	<0.001	0.222	0.041	<0.0001	<0.0001	0.005	0.006	0.015	0.002	0.02
293999	6261951	St Marys	SMGW-BH-A302	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.011	-	-	-	-	-	-	-	<0.0002	-	-	-	0.0019	-	0.018	-	0.009	-	1.5	-	0.0022	-	1.4	-	<0.00001	-	-	-	0.055	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Feb-21	-	-	-	-	-	0.6	-	-	-	0.04	<0.05	-	-	1.6	0.05	-	0.011	0.008	0.19	0.18	<0.001	<0.001	0.12	0.12	<0.0002	<0.0002	-	-	0.003	<0.001	0.009	0.009	0.007	<0.001	2.3	0.59	0.002	<0.001	1	1	<0.0001	<0.0001	-	-	0.018	0.017	<0.001
294051	6261946	St Marys	SMGW-BH-A102	06-Mar-20	-	-	8310	587	-	-	-	-	-	<0.01	-	251	-	3.06	0.02	-	0.003	0.002	0.1	0.099	0.003	0.002	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.003	<0.001	0.104	0.102	<0.002	<0.001	19.8	18.5	<0.002	<0.001	1.85	1.87	<0.0001	<0.0001	0.009	0.007	0.03	0.029	<0.01
294051	6261946	St Marys	SMGW-BH-A102	05-Jun-20	<0.05	6830	-	-	592	-	-	6	-	<0.01	-	-	257	0.08	0.02	-	0.003	0.003	0.072	0.068	0.002	0.002	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.101	0.093	<0.001	<0.001	24.9	25	<0.001	<0.001	1.97	1.88	<0.0001	<0.0001	0.005	0.004	0.03	0.025	<0.01
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	<0.1	7830	-	-	549	-	-	-	-	<0.1	-	-	296	0.18	0.17	-	0.002	0.002	0.065	0.06	0.009	0.009	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.145	0.131	<0.001	<0.001	16.3	16.1	0.001	<0.001	0.98	1	<0.0001	<0.0001	0.002	0.002	0.049	0.042	<0.01
294051	6261946	St Marys	SMGW-BH-A102	29-Jul-20	0.11	9420	-	-	434	-	-	20	-	<0.01	-	-	317	0.55	0.18	-	0.002	0.001	0.067	0.058	0.012	0.01	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.178	0.152	<0.001	<0.001	16.1	14.7	0.002	0.001	0.792	0.747	<0.0001	<0.0001	0.001	<0.001	0.059	0.052	<0.01
294051	6261946	St Marys	SMGW-BH-A102	27-Aug-20	<0.02	9230	-	-	408	-	-	60	-	<0.01	-	-	278	1.76	0.06	-	0.004	0.002	0.092	0.07	0.006	0.006	<0.05	<0.05	<0.0001	<0.0001	-	-	0.003	<0.001	0.18	0.17	0.004	<0.001	23.9	19.3	0.002	<0.001	0.944	0.875	<0.0001	<0.0001	0.001	<0.001	0.059	0.056	<0.01
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	<0.02	8790	-	-	422	-	-	12	-	<0.01	-	-	260	0.24	0.04	-	0.003	0.002	0.06	0.062	0.006	0.004	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.139	0.118	<0.001	<0.001	17.8	15.6	<0.001	<0.001	0.86	0.919	<0.0001	<0.0001	0.002	0.001	0.046	0.039	<0.01
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	<0.1	7760	-	-	591	-	-	-	-	<0.1	-	-	293	0.19	0.17	-	0.002	0.002	0.07	0.064	0.009	0.008	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.152	0.14	0.001	0.002	15.8	15.9	0.001	0.001	0.94	0.959	<0.0001	<0.0001	0.002	0.001	0.05	0.046	<0.01
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	<0.02	8660	-	-	441	-	-	9	-	<0.01	-	-	262	0.27	0.04	-	0.003	0.002	0.06	0.063	0.008	0.004	<0.05	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.145	0.126	<0.001	0.001	17.8	15.4	0.001	<0.001	0.822	0.921	<0.0001	<0.0001	0.001	0.001	0.05	0.041	<0.01
294138	6261944	St Marys	SMGW-BH-A002	18-Dec-19	-	-	19,500	961	-	-	-	37	-	<0.01	-	1060	-	<0.56	<0.01	-	0.002	0.001	1.29	0.122	<0.001	<0.001	<0.05	0.06	<0.0001	<0.0001	-	-	<0.002	<0.001	0.015	0.016	<0.007	<0.001	1.9	1.25	<0.002	<0.001	1.38	1.52	<0.0001	<0.0001	0.002	0.002	0.005	0.006	<0.01
294138	6261944	St Marys	SMGW-BH-A002	24-Jan-20	-	-	15,500	672	-	-	-	36	-	<0.01	-	913	-	<0.83	<0.01	-	<0.002	<0.001	0.449	0.152	<0.001	<0.001	<0.05	0.05	0.0001	0.0001	-	-	<0.002	<0.001	0.042	0.037	0.014	0.002	2.13	<0.05	<0.002	<0.001	2.87	2.85	<0.0001	<0.0001	0.002	0.001	0.024	0.022	<0.01
294138	6261944	St Marys	SMGW-BH-A002	06-Mar-20	-	-	8310	587	-	-	-	-	-	<0.01	-	251	-	3.06	0.02	-	0.003	0.002	0.1	0.099	0.003	0.002	0.05	0.05	0.0001	0.0001	-	-	<0.001	<0.001	0.104	0.102	0.002	0.001	19.8	18.5	0.002	0.001	1.85	1.87	-	-	0.009	0.007	0.03	0.029	<0.01
294138	6261944	St Marys	SMGW-BH-A002	20-Apr-20	-	-	20,700	667	-	-	-	12	-	<0.01	-	991	-	<0.15	<0.01	-	0.002	0.002	0.212	0.115	<0.001	<0.001	<0.06	<0.05	<0.0001	<0.0001	-	-	<0.001	<0.001	0.03	0.026	<0.005	<0.001	1.78	1.53	<0.001	<0.001	1.8	1.76	<0.0001	<0.0001	0.002	0.001	0.01	0.008	<0.01
294138	6261944	St Marys	SMGW-BH-A002	27-Aug-20	<0.02	8170	-	-	827	-	-	17	-	<0.01	-	-	293	0.61	0.08	-	<0.001	<0.001	0.357	0.04	0.002	0.002	<0.05	<0.05	0.0002	0.0002	-	-	<0.001	<0.001	0.05	0.045	0.019	0.014	0.34	<0.05	0.001	0.001	0.867	0.751	<0.0001	<0.0001	<0.001	<0.001	0.04	0.034	<0.01
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Inorganics										Organic	Metals												
					Total Phosphorus as P (Organic Phosphate as P)	Total Dissolved Solids @180oC	Total Dissolved Solids @180oC (Filtered)	Sulfate as SO4	Sulfate as SO4 (Filtered)	TKN (as N)	Alkalinity (Bicarbonate as CaCO3)	Total Suspended Solids (TSS)	Nitrogen (Total Oxidised)	Reactive Phosphorus as P	Methane	Magnesium	Magnesium (Filtered)	Aluminium	Aluminium (Filtered)	Arsenic III	Arsenic	Arsenic (Filtered)	Barium	Barium (Filtered)	Beryllium	Beryllium (Filtered)	Boron	Boron (Filtered)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									1		1			0.01	0.01		1		0.01			0.001						
Airport Regulations - Water pollution - accepted limits - fresh water																		0.1	0.1		0.05	0.05			0.004	0.004		
ANZG (2018) Freshwater 95% toxicant DGVs																		0.055	0.055	0.024							0.37	0.37
ANZG (2018) Freshwater 99% toxicant DGVs																		0.027	0.027	0.001							0.09	0.09
PFAS NEMP 2018 Table 5 Freshwater 99%																												
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	-	-	-	-	352	-	408	-	-	<0.01	-	-	812	-	0.01	-	-	<0.001	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	-	-	-	790	-	<0.2	510	65	-	<0.01	<0.05	820	-	0.34	<0.05	-	0.007	0.01	0.39	0.35	<0.001	<0.001	0.08	0.11
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0051	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	-	-	-	740	-	<0.2	430	240	-	0.04	<0.05	770	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0022	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	0.24	<0.05	-	-	<0.001	0.22	0.23	<0.001	<0.001	0.07	0.07
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	13,600	-	-	79	-	-	-	-	-	-	-	570	1.32	-	-	0.002	0.002	5.92	2.11	-	-	0.06	0.1
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	0.17	12,800	-	-	66	-	-	370	-	<0.01	-	-	549	2.52	<0.01	-	0.003	0.001	6.08	1.92	<0.001	<0.001	0.08	0.07
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	0.1	11,400	-	-	45	-	-	88	-	<0.01	-	-	468	0.84	<0.01	-	0.001	<0.001	3.25	1.16	<0.001	<0.001	0.06	0.06
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	<0.02	10,000	-	-	46	-	-	26	-	<0.01	-	-	407	0.46	<0.01	-	0.002	<0.001	2.3	1.6	<0.001	<0.001	0.07	0.05
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	0.12	-	-	-	18	-	-	113	-	<0.01	-	-	321	0.33	0.01	-	<0.001	0.001	5.04	4.57	<0.001	<0.001	<0.05	<0.05
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	<0.02	11,600	-	-	59	-	-	-	-	<0.01	-	-	567	1	<0.01	-	0.001	0.001	5.07	2.24	<0.001	<0.001	0.05	0.09

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Metals																						
					Cadmium	Cadmium (Filtered)	Chromium (hexavalent)	Chromium (hexavalent) (Filtered)	Chromium (III+VI)	Chromium (III+VI) (Filtered)	Cobalt	Cobalt (Filtered)	Copper	Copper (Filtered)	Iron	Iron (Filtered)	Lead	Lead (Filtered)	Manganese	Manganese (Filtered)	Mercury	Mercury (Filtered)	Molybdenum	Molybdenum (Filtered)	Nickel	Nickel (Filtered)	Selenium
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL						0.0001		0.01		0.001		0.001		0.001		0.05		0.001		0.001		0.0001				0.001	
Airport Regulations - Water pollution - accepted limits - fresh water					0.0002	0.0002			0.01	0.01			0.002	0.002	1	1	0.001	0.001			0.0001	0.0001			0.015	0.015	0.005
ANZG (2018) Freshwater 95% toxicant DGVs					0.0002	0.0002	0.0004	0.0004					0.0014	0.0014			0.0034	0.0034	1.9	1.9	0.0006	0.0006			0.011	0.011	0.011
ANZG (2018) Freshwater 99% toxicant DGVs					0.00006	0.00006	0.00001	0.00001					0.001	0.001			0.001	0.001	1.2	1.2	0.00006	0.00006			0.008	0.008	0.005
PFAS NEMP 2018 Table 5 Freshwater 99%																											
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	-	<0.0001	-	-	-	<0.001	-	0.02	-	0.002	-	0.08	-	<0.001	-	1.53	-	<0.0001	-	-	-	0.009	-
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	<0.0002	<0.0002	-	-	0.003	0.002	0.011	0.01	0.008	0.022	0.72	0.15	0.002	0.004	0.45	0.41	<0.0001	<0.0001	0.023	0.018	0.019	0.02	0.002
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	<0.0002	-	-	-	0.0012	-	0.022	-	0.0025	-	0.4	-	0.0013	-	0.96	-	<0.00001	-	-	-	0.027	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	0.0024	-	-	-	0.0085	-	0.035	-	0.012	-	7	-	0.0047	-	6.7	-	<0.00001	-	-	-	1	-	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	0.0008	-	-	-	<0.001	0.034	0.034	-	0.002	0.64	<0.05	-	<0.001	6.6	6.4	-	<0.0001	<0.005	<0.005	-	0.046	<0.001
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	0.002	-	0.025	0.025	0.007	0.001	5.95	4.03	0.002	-	0.813	0.864	-	-	0.002	0.002	0.009	0.009	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	<0.0001	<0.0001	-	-	0.004	<0.001	0.025	0.021	0.011	<0.001	8.68	4.16	0.004	<0.001	0.807	0.707	<0.0001	<0.0001	0.003	0.002	0.013	0.007	<0.01
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	<0.0001	<0.0001	-	-	0.002	<0.001	0.018	0.013	0.005	0.001	4.44	2.85	0.002	<0.001	0.68	0.617	<0.0001	<0.0001	0.002	0.001	0.007	0.004	<0.01
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	<0.0001	<0.0001	-	-	<0.001	<0.001	0.015	0.015	<0.001	<0.001	3.79	2.99	<0.001	<0.001	0.614	0.633	<0.0001	<0.0001	0.001	0.001	0.005	0.004	<0.01
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	<0.0001	<0.0001	-	-	<0.001	<0.001	0.007	0.008	0.003	<0.001	1.94	1.84	<0.001	<0.001	0.352	0.397	<0.0001	<0.0001	<0.001	<0.001	0.003	0.003	<0.01
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	<0.0001	<0.0001	-	-	0.002	<0.001	0.022	0.026	0.005	<0.001	4.86	4.44	0.001	<0.001	0.737	0.833	<0.0001	<0.0001	0.003	0.007	0.011	0.008	<0.01

													Per and polyfluoroalkyl substances																																			BTEX				
					Selenium (Filtered)	Strontium	Strontium (Filtered)	Tin (Filtered)	Vanadium	Vanadium (Filtered)	Zinc	Zinc (Filtered)	Sum of PFAS (WA DER List)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	6:2 Fluorotelomer Sulfonate (6:2 FTS)	Perfluorononanesulfonic acid (PFNS)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeF	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE	N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtF	N-methylperfluorooctane sulfonamidoacetic acid (NM	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	Benzene	Toluene	Ethylbenzene	Total BTEX	Xylene (o)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.01							0.005	0.01	2E-05	2E-05	2E-05	2E-05	1E-05	2E-05	0.0001	2E-05	2E-05				2E-05	1E-05	2E-05	5E-05	2E-05	2E-05	2E-05	2E-05	5E-05	2E-05	5E-05	5E-05	2E-05	2E-05	5E-05	5E-05	5E-05	5E-05	5E-05	1E-05	1E-05	1	2	2	1	2
Airport Regulations - Water pollution - accepted limits - fresh water					0.005						0.005	0.005																																			300	300	140		
ANZG (2018) Freshwater 95% toxicant DGVs					0.011						0.008	0.008																																			950				350
ANZG (2018) Freshwater 99% toxicant DGVs					0.005						0.0024	0.0024																																			600				200
PFAS NEMP 2018 Table 5 Freshwater 99%																		0.00000023									0.019																								
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
288413	6246761	WSI	WSA GW06	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-17	-	-	-	-	-	-	-	0.019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288413	6246761	WSI	WSA GW06	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288413	6246761	WSI	WSA GW06	06-Oct-17	-	-	-	-	-	-	-	0.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288413	6246761	WSI	WSA GW06	18-Dec-17	-	-	-	-	-	-	-	0.061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288413	6246761	WSI	WSA GW06	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	18-Apr-18	-	-	-	-	-	-	-	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	<1	<1	-	<1
288413	6246761	WSI	WSA GW06	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Jul-18	-	-	-	-	-	-	-	0.027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	<1	<1	-	<1
288413	6246761	WSI	WSA GW06	06-Sep-18	-	-	-	-	-	-	-	0.01	<0.05	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	-	<0.00005	-	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.0001	<1	<1	<1	-	<1
288413	6246761	WSI	WSA GW06	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	12-Dec-18	-	-	-	-	-	-	-	0.076	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288413	6246761	WSI	WSA GW06	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Apr-19	-	-	-	-	-	-	-	0.038	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288413	6246761	WSI	WSA GW06	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	28-Mar-17	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	29-Mar-17	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288413	6246761	WSI	WSA GW07	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	3	<1	-	<1
288413	6246761	WSI	WSA GW07	06-Oct-17	-	-	-	-	-	-	-	0.071	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Dec-17	-	-	-	-	-	-	-	0.012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288413	6246761	WSI	WSA GW07	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Apr-18	-	-	-	-	-	-	-	0.038	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288413	6246761	WSI	WSA GW07	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Jul-18	-	-	-	-	-	-	-	0.081	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288413	6246761	WSI	WSA GW07	06-Sep-18	-	-	-	-	-	-	-	0.29	<0.05	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	-	<0.00005	-	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.0001	<1	<1	<1	-	<1
288413	6246761	WSI	WSA GW07	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	13-Dec-18	-	-	-	-	-	-	-	0.033	<0.05	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	-	<0.00005	-	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.0001	<1	<1	<1	-	<1
288413	6246761	WSI	WSA GW07	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Apr-19	-	-	-	-	-	-	-	0.13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288413	6246761	WSI	WSA GW07	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	29-Mar-17	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	1	<1	-	<1
288574	6246161	WSI	WSA GW04	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288574	6246161	WSI	WSA GW04	06-Oct-17	-	-	-	-	-	-	-	0.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288574	6246161	WSI	WSA GW04	18-Dec-17	-	-	-	-	-	-	-	0.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288574	6246161	WSI	WSA GW04	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Apr-18	-	-	-	-	-	-	-	0.026	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288574	6246161	WSI	WSA GW04	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Jul-18	-	-	-	-	-	-	-	0.026	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288574	6246161	WSI	WSA GW04	06-Sep-18	-	-	-	-	-	-	-	0.038	<0.05	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	-	<0.00005	-	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.0001	<1	<1	<1	-	<1
288574	6246161	WSI	WSA GW04	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	12-Dec-18	-	-	-	-	-	-	-	0.028	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288574	6246161	WSI	WSA GW04	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Apr-19	-	-	-	-	-	-	-	0.059	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
288574	6246161	WSI	WSA GW04	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288838	6247416	WSI	SMGW-BH-C206	08-Sep-20	<0.01	10.8	10.4	-	<0.01	<0.01	0.012	0.007	<0.01	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00002	<0.0001	<0.00002	<0.00002	-	<0.00005	-	<0.00002	<0.00001	<0.00002	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00005	<0.00002	<0.00005	<0.00005	<0.00002	<0.00002	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00001	<0.00001	<1	<2	<2	<1	<2
288852	6246085	WSI	SMGW-BH-C002	27-Aug-20	<0.01	0.102	0.098	-	<0.01	<0.01	0.156	0.063	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288852	6246085	WSI	SMGW-BH-C002	06-Sep-19	<0.01	-	-	-	-	-	-	0.005	<0.05	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0002	<0.00005	<0.00005	-	-	-	<0.00005	<0.00005	<0.00005	<0.00012	<0.00005	<0.00005	<0.00005	<0.00005	<0.00012	<0.00005	<0.00012	<0.00012	<0.00005	<0.00005	<0.00012	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<1	<2	<2	<1	<2
288878	6246774	WSI	SMGW-BH-C208	17-May-21	<0.01	21.8	20.7	-	<0.01	<0.01	0.013	<0.005	<0.01	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00002	<0.0001	<0.00002	<0.00002	-	<0.00005	-	<0.00002	<0.00001	<0.00002	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00005	<0.00002	<0.00005	<0.00005	<0.00002	<0.00002	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00001	<0.00001	2	6	<2	10	<2
288970	6246102	WSI	SMGW-BH-C001S	27-Aug-20	<0.01	0.804	0.896	-	<0.01	<0.01	0.042	0.014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288970	6246102	WSI	SMGW-BH-C001S	06-Sep-19	<0.01	-	-	-	-	-	-	0.009	<0.05	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0002	<0.00005	<0.00005	-	-	-	<0.00005	<0.00005	<0.00005	<0.00012	<0.00005	<0.00005	<0.00005	<0.00005	<0.00012	<0.00005	<0.00012	<0.00012	<0.00005	<0.00005	<0.00012	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<1	386 - 42	<2	430	<2 - 2
289013	6246245	WSI	WSA GW08	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	29-Mar-17	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	16	<1	-	<1
289013	6246245	WSI	WSA GW08	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	12	<1	-	<1
289013	6246245	WSI	WSA GW08	05-Oct-17	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
289013	6246245	WSI	WSA GW08	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Dec-17	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
289013	6246245	WSI	WSA GW08	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Apr-18	-	-	-	-	-	-	-	0.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
289013	6246245	WSI	WSA GW08	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Jul-18	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
289013	6246245	WSI	WSA GW08	06-Sep-18	-	-	-	-	-	-	-	0.011	<0.05	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	-	<0.00005	-	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.0001	-	-	-	-	-
289013	6246245	WSI	WSA GW08	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	13-Dec-18	-	-	-	-	-	-	-	<0.005	<0.05	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	-	<0.00005	-	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.0001	<1	<1	<1	-	<1

													Per and polyfluoroalkyl substances																																				BTEX				
					Selenium (Filtered)	Strontium	Strontium (Filtered)	Tin (Filtered)	Vanadium	Vanadium (Filtered)	Zinc	Zinc (Filtered)	Sum of PFAS (WA DER List)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	6:2 Fluorotelomer Sulfonate (6:2 FTS)	Perfluorononanesulfonic acid (PFNS)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeF	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE	N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtF	N-methylperfluorooctane sulfonamidoacetic acid (NM	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	Benzene	Toluene	Ethylbenzene	Total BTEX	Xylene (o)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.01							0.005	0.01	2E-05	2E-05	2E-05	2E-05	1E-05	2E-05	0.0001	2E-05	2E-05				2E-05	1E-05	2E-05	5E-05	2E-05	2E-05	2E-05	2E-05	5E-05	2E-05	5E-05	5E-05	2E-05	2E-05	5E-05	5E-05	5E-05	5E-05	5E-05	1E-05	1E-05	1	2	2	1	2
Airport Regulations - Water pollution - accepted limits - fresh water					0.005						0.005	0.005																																			300	300	140		
ANZG (2018) Freshwater 95% toxicant DGVs					0.011						0.008	0.008																																			950				350
ANZG (2018) Freshwater 99% toxicant DGVs					0.005						0.0024	0.0024																																			600				200
PFAS NEMP 2018 Table 5 Freshwater 99%																		0.00000023									0.019																								
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
289013	6246245	WSI	WSA GW08	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	0.008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
289013	6246245	WSI	WSA GW08	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	07-Oct-20	<0.01	11.7	12.2	-	<0.01	<0.01	0.032	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	02-Dec-20	<0.01	16.8	14.8	-	<0.01	<0.01	0.016	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289220	6247060	WSI	SMGW-BH-C331	29-Apr-21	-	-	-	-	-	-	-	<0.05	0.0165	0.00000	0.00000	0.00000	0.00000	5.0E-7	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	.000016	<1	5	<1	-	<1
289414	6246914	WSI	SMGW-BH-C325	29-Apr-21	0.002	1.6	1.7	-	<0.005	<0.005	0.041	0.019	0.8108	0.000019	0.000005	0.000012	0.00000	.000005	0.00000	0.00036	0.00018	0.00014	.000004	0.00000	0.00000	0.00005	0.00005	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	.000017	.000819	<1	6	<1	-	<1
289595	6246615	WSI	SMGW-BH-C322	13-May-21	0.001	-	7.7	-	-	0.023	-	0.044	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	12	<1	-	<1
289595	6246615	WSI	SMGW-BH-C322	13-May-21	0.001	8.4	8.1	-	0.004	0.003	0.036	0.028	-	<4.0E-7	0.00000	<2.0E-7	0.00000	<2.0E-7	0.00000	0.00000	0.00000	4.0E-7	-	.000001	-	<4.0E-7	4.0E-7	0.00000	-	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	0.00000	-	<4.0E-7	0.00000	<2.0E-7	.00000	<0.1	35	<0.1	35	<0.1
289595	6246615	WSI	SMGW-BH-C322	13-May-21	0.001	-	7.3	-	-	0.007	-	0.033	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<5	190	<5	-	<5
289599	6245794	Bringelly	SMGW-BH-D303S	18-Feb-21	<0.001	14	14	-	<0.005	<0.005	0.024	0.028	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	<1	<1	-	<1
289599	6245794	Bringelly	SMGW-BH-D303S	15-Mar-21	<0.001	17	15	-	<0.005	<0.005	0.013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	<0.001	16	16	-	<0.005	<0.005	0.014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	0.001	16	15	-	0.02	<0.001	0.04	0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	0.002	17	16	-	<0.005	<0.005	0.014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	17-Feb-21	<0.001	27	24	<0.005	<0.005	<0.005	0.039	-	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	<1	<1	-	<1
289601	6245801	Bringelly	SMGW-BH-D303	15-Mar-21	<0.001	27	26	-	<0.005	<0.005	0.027	0.025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	05-May-21	<0.001	30	27	-	<0.005	<0.005	0.043	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289629	6246535	WSI	SMGW-BH-C320	29-Apr-21	0.002	7.5	6.8	-	<0.005	<0.005	0.026	0.014	<0.005	0.00000	0.00000	0.00000	0.00000	5.0E-7	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	34	<1	-	<1
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<0.001	1.9	1.6	-	<0.005	<0.005	0.008	<0.005	0.0456	.000006	0.00000	.000004	0.00000	.000001	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	.000005	.000045	<1	<1	<1	-	<1
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<0.001	2.2	1.7	-	0.003	<0.001	0.026	-	-	.000006	0.00000	.000006	0.00000	.00000	0.00000	<0.0000	<0.0000	.000006	-	.000001	-	.000001	.000002	0.00000	-	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	0.00000	-	<4.0E-7	0.00000	.000008	.00002	<1	<1	<1	-	<1
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<0.001	1.7	1.8	-	<0.005	<0.005	-	<0.005	0.0377	.000006	0.00000	.000004	0.00000	.000001	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	.000005	.000037	<1	<1	<1	-	<1
289809	6246630	WSI	SMGW-BH-C321	13-May-21	<0.001	-	1.7	-	-	<0.005	-	0.009	0.0195	.000005	0.00000	.000004	0.00000	.000001	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	.000005	.000019	<1	<1	<1	-	<1
290097	6245334	Bringelly	SMGW-BH-D305	15-Feb-21	<0.001	9	9	-	0.024	<0.005	0.071	0.017	<0.005	0.00000	0.00000	0.00000	0.00000	2.0E-7	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	3	<1	-	<1
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	0.001	13	11	-	<0.005	<0.005	0.036	0.012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	<0.001	13	11	-	0.011	<0.001	0.079	0.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	<0.001	11	10	-	<0.005	<0.005	0.035	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290274	6248345	WSI	SMGW-BH-C201S	27-Aug-20	0.01	10.8	10.2	-	0.01	0.01	0.005	0.007	<0.01	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0001	<0.0000	<0.0000	-	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<1	<2	<2	<1	<2
290279	6248348	WSI	SMGW-BH-C201	03-Sep-20	<0.01	17.7	15.8	-	0.02	<0.01	0.113	<0.005	<0.01	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0001	<0.0000	<0.0000	-	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<1	<2	<2	<1	<2
290304	6247361	WSI	SMGW-BH-C351	21-Apr-21	-	-	-	-	-	-	-	<0.005	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	4	<1	-	<1
290390	6244794	Southern Tunnels	SMGW-BH-D205	27-Nov-20	<0.01	19.1	17.6	-	<0.01	<0.01	0.013	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	17-Feb-21	<0.01	17.9	17.2	-	<0.01	<0.01	0.014	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	26-May-21	<0.01	15.8	15.5	-	<0.01	<0.01	0.022	0.012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	28-Mar-17	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
290461	6247764	WSI	WSA GW16	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
290461	6247764	WSI	WSA GW16	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Oct-17	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
290461	6247764	WSI	WSA GW16	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	17-Apr-18	-	-	-	-	-	-	-	0.058	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
290461	6247764	WSI	WSA GW16	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Jul-18	-	-	-	-	-	-	-	0.029	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	07-Sep-18	-	-	-	-	-	-	-	0.038	<0.05	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	-	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0001	-	-	-	-	-
290461	6247764	WSI	WSA GW16	12-Dec-18	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
290461	6247764	WSI	WSA GW16	03-Apr-19	-	-	-	-	-	-	-	0.014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
290461	6247764	WSI	WSA GW16	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290513	6244560	Southern Tunnels	SMGW-BH-D206	17-May-21	<0.01	21	19.1	-	<0.01	<0.01	0.026	0.022	<0.01	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0001	<0.0000	<0.0000	-	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<1	<2	<2	<1	<2
290677	6244060	Aerotropolis	SMGW-BH-D322	15-Mar-21	-	-	-	-	-	-	<0.005	-	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	44	<1	-	<1
290695	6243992	Aerotropolis	SMGW-BH-D324	22-Feb-21	-	-	-	-	-	-	0.011	-	0.007	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	.000006	0.00000	.000001	0.00000	0.00000	-	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-	0.00000	0.00000	0.00000	.000007	<1	3	<1	-	<1
290695	6243992	Aerotropolis	SMGW-BH-D324	15-Mar-21	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	5	<1	-	<1
290704	6243892	Aerotropolis	SMGW-BH-D326	18-Feb-21	-	-	-	-	-	-	0.025	0.022	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	<1	<1	-	<1
290704	6243892	Aerotropolis	SMGW-BH-D326	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
290715	6243914	Aerotropolis	SMGW-BH-D308	18-Feb-21	<0.001	0.56	<0.005	-	<0.005	<0.005	<0.005	0.014	<0.005	0.00000	0.00000	0.00000	0.00000	2.0E-7	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	1	<1	-	<1
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jun-20	<0.01	12.6	11.5	-	<0.01	<0.01	0.006	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	<0.01	11.4	10.5	-	<0.01	<0.01	<0.005	<0.005	<0.01	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0001	<0.0000	<0.0000	-	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Aug-20	<0.01	12	11.3	-	<0.01	<0.01	0.015	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Nov-20	<0.01	13.9	12.4	-	<0.01	<0.01	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	<0.01	14.1	12.7	-	<0.01	<0.01	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	<0.01	11.5	10.8	-	<0.01	<0.01	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	<0.01	14.4	12.8	-	<0.01	<0.01	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	11-Aug-20	<0.01	15.7	14.6	-	<0.01	<0.01	0.034	0.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Aug-20	<0.01	16.7	14.8	-	<0.01	<0.01	0.057	0.021	<0.01	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0001	<0.0000	<0.0000	-	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	28-Sep-20	<0.01	16.8	16.9	-	<0.01	<0.01	0.026	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Nov-20	<0.01	17.4	15.7	-	<0.01	<0.01	0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	01-Feb-21	<0.01	18.7	19.2	-	<0.01	<0.01	0.009	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	23-Feb-21	-	-	-	-	-	-	-	-	<0.01	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0001	<0.0000	<0.0000	-	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<1	<2	<2	<1	<2
290716	6244026	Aerotropolis	SMGW-BH-D207	01-Sep-20	<0.01	9.49	8.74	-	<0.01	<0.01	0.013	<0.005	<0.01	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0001	<0.0000	<0.0000	-	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<1	<2	<2	<1	<2
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	<0.01	9.15	9.23	-	<0.01	<0.01	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Selenium (Filtered)	Strontium	Strontium (Filtered)	Tin (Filtered)	Vanadium	Vanadium (Filtered)	Zinc	Zinc (Filtered)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL					0.01							0.005
Airport Regulations - Water pollution - accepted limits - fresh water					0.005						0.005	0.005
ANZG (2018) Freshwater 95% toxicant DGVs					0.011						0.008	0.008
ANZG (2018) Freshwater 99% toxicant DGVs					0.005						0.0024	0.0024
PFAS NEMP 2018 Table 5 Freshwater 99%												
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	<0.01	8.97	9.14	-	<0.01	<0.01	<0.005	<0.005
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	<0.01	9.42	9.34	-	<0.01	<0.01	<0.005	<0.005
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	<0.01	8.92	9.14	-	<0.01	<0.01	0.007	<0.005
290720	6243765	Aerotropolis	SMGW-BH-D329	18-Feb-21	-	-	-	-	-	-	0.014	0.012
290720	6243765	Aerotropolis	SMGW-BH-D329	16-Mar-21	-	-	-	-	-	-	-	-
290742	6243691	Aerotropolis	SMGW-BH-D208	17-May-21	<0.01	2.53	2.59	-	<0.01	<0.01	0.073	0.059
290762	6248715	WSI	SMGW-BH-C305	20-Apr-21	0.002	5	4.6	-	0.01	<0.005	0.015	0.008
290762	6248715	WSI	SMGW-BH-C305	12-May-21	<0.001	3.8	4.2	-	<0.005	<0.005	0.014	0.012
290945	6248669	WSI	SMGW-BH-C304	20-Apr-21	0.001	2.7	2.7	-	0.009	<0.005	0.017	0.011
290964	6253779	Luddenham Road	SMGW-BH-B120	26-Aug-20	<0.01	7.1	7.39	-	<0.01	<0.01	0.028	<0.005
290964	6253779	Luddenham Road	SMGW-BH-B120	23-Feb-21	<0.01	7.25	7.24	-	<0.01	<0.01	0.017	<0.005
291041	6254012	Luddenham Road	SMGW-BH-B320	15-Apr-21	-	6	4.4	-	<0.005	<0.005	0.012	-
291173	6254264	Luddenham Road	SMGW-BH-B319	02-Mar-21	<0.01	3.79	3.72	-	<0.01	<0.01	0.492	0.482
291173	6254264	Luddenham Road	SMGW-BH-B319	26-May-21	<0.01	3.38	3.22	-	<0.01	<0.01	0.117	<0.005
291265	6247780	WSI	WSA GW23	28-Mar-17	-	-	-	-	-	-	-	<0.005
291265	6247780	WSI	WSA GW23	04-Oct-17	-	-	-	-	-	-	-	0.069
291265	6247780	WSI	WSA GW23	06-Oct-17	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Dec-17	-	-	-	-	-	-	-	0.008
291265	6247780	WSI	WSA GW23	17-Apr-18	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Apr-18	-	-	-	-	-	-	-	<0.084
291265	6247780	WSI	WSA GW23	03-Jul-18	-	-	-	-	-	-	-	0.039
291265	6247780	WSI	WSA GW23	05-Sep-18	-	-	-	-	-	-	-	0.041
291265	6247780	WSI	WSA GW23	07-Sep-18	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	13-Dec-18	-	-	-	-	-	-	-	0.032
291265	6247780	WSI	WSA GW23	14-Dec-18	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Apr-19	-	-	-	-	-	-	-	0.039
291265	6247780	WSI	WSA GW23	05-Apr-19	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	<0.001	4.5	4.6	-	0.012	<0.005	0.041	0.02
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	<0.001	-	4.5	-	-	<0.001	-	0.023
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	<0.001	4.5	4.5	-	0.014	<0.005	0.04	0.019
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<0.001	4.8	5.1	-	<0.005	<0.005	0.015	0.015
291326	6249157	WSI	SMGW-BH-C302	12-May-21	0.001	5.8	5.7	-	0.018	<0.001	0.05	0.077
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<0.001	4.5	5.1	-	<0.005	<0.005	0.015	0.01
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<0.001	0.76	0.71	-	<0.005	<0.005	0.058	0.054
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<0.001	0.82	0.6	-	0.003	<0.001	0.069	0.05
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<0.001	0.76	0.7	-	<0.005	<0.005	0.056	0.05
291351	6247890	WSI	SMGW-BH-C343	20-Apr-21	-	-	-	-	-	-	-	0.077
291370	6249349	WSI	SMGW-BH-C301	15-Apr-21	0.001	3	3.2	-	0.1	<0.005	0.13	0.009
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	<0.01	10.7	5.26	-	<0.01	<0.01	0.049	0.009
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jul-20	<0.01	9.48	8.65	-	<0.01	<0.01	0.038	<0.005
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	<0.01	9.46	9.59	-	<0.01	<0.01	0.026	<0.005
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	<0.01	7.47	5.81	-	<0.01	<0.01	0.13	0.156
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	<0.01	9.98	10	-	<0.01	<0.01	0.031	<0.005
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	<0.01	11.8	11.2	-	<0.01	<0.01	0.029	0.01
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	<0.01	6.36	7.1	-	<0.01	<0.01	0.184	0.082
291504	6255514	Luddenham Road	SMGW-BH-B313	10-May-21	<0.001	10	9.8	-	<0.005	<0.005	0.034	0.037
291542	6248270	WSI	SMGW-BH-C340	20-Apr-21	-	-	-	-	-	-	-	0.13
291562	6255942	Luddenham Road	SMGW-BH-B312	12-Feb-21	0.003	2.6	2.4	-	0.026	0.02	0.062	0.05
291562	6255942	Luddenham Road	SMGW-BH-B312	16-Mar-21	-	-	-	-	-	-	0.028	-
291572	6256049	Luddenham Road	SMGW-BH-B109	30-Jun-20	<0.01	5.7	5.13	-	0.01	<0.01	0.049	<0.005
291572	6256049	Luddenham Road	SMGW-BH-B109	26-Aug-20	<0.01	5.38	5.63	-	<0.01	<0.01	0.025	0.007
291572	6256049	Luddenham Road	SMGW-BH-B109	22-Feb-21	<0.01	5.59	5.51	-	<0.01	<0.01	0.005	<0.005
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	<0.01	-	-	-	-	-	<0.005	<0.005
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	<0.01	-	-	-	-	-	-	<0.005
291703	6256950	Luddenham Road	SMGW-BH-B106	30-Jun-20	<0.01	2.64	2.64	-	<0.01	<0.01	0.274	0.279
291703	6256950	Luddenham Road	SMGW-BH-B106	31-Jul-20	<0.01	1.84	1.86	-	<0.01	<0.01	0.281	0.271
291703	6256950	Luddenham Road	SMGW-BH-B106	26-Aug-20	<0.01	2.32	2.31	-	<0.01	<0.01	0.345	0.322
291703	6256950	Luddenham Road	SMGW-BH-B106	15-Feb-21	0.01	1.93	2.1	-	<0.01	<0.01	0.487	0.274
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	-	3.7	4.2	-	<0.005	<0.005	0.24	0.18
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<0.001	3.9	4	-	0.004	<0.001	0.34	0.24
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	-	3.6	4.2	-	<0.005	<0.005	0.22	0.18
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	<0.01	-	-	-	-	-	0.011	0.011
291728	6258996	Orchard Hills	SMGW-BH-A017	18-Dec-19	<0.01	11.3	12.4	-	<0.01	<0.01	<0.007	<0.005
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Jan-20	<0.01	10.5	10.3	-	<0.01	<0.01	<0.005	<0.005
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Apr-20	<0.01	0.362	0.339	-	<0.01	<0.01	0.015	0.008
291728	6258996	Orchard Hills	SMGW-BH-A017	25-Aug-20	<0.01	1.44	0.962	-	<0.01	<0.01	0.04	0.009
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	<0.01	-	-	-	-	-	-	0.011
291737	6259192	Orchard Hills	SMGW-BH-A310	21-Apr-21	-	-	-	-	-	-	-	-

		Per and polyfluoroalkyl substances																
Location_Code	Sampled_Date	Sum of PFAS (WA DER List)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	6:2 Fluorotelomer Sulfonate (6:2 FTS)	Perfluorononanesulfonic acid (PFNS)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeF
		µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL		0.01	2E-05	2E-05	2E-05	2E-05	1E-05	2E-05	0.0001	2E-05	2E-05				2E-05	1E-05	2E-05	5E-05
Airport Regulations - Water pollution - accepted limits - fresh water																		
ANZG (2018) Freshwater 95% toxicant DGVs																		
ANZG (2018) Freshwater 99% toxicant DGVs																		
PFAS NEMP 2018 Table 5 Freshwater 99%							0.00000023									0.019		
SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-D329	18-Feb-21	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-D329	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-D208	17-May-21	<0.01	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00002	<0.0001	<0.00002	<0.00002	-	<0.00005	-	<0.00002	<0.00001	<0.00002	<0.00005
SMGW-BH-C305	20-Apr-21	<0.005	0.00000	0.00000	0.00000	0.00000	1.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-C305	12-May-21	0.012	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.000012	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-C304	20-Apr-21	<0.005	0.00000	0.00000	0.00000	0.00000	2.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-B120	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B120	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B320	15-Apr-21	<0.005	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-
SMGW-BH-B319	02-Mar-21	<0.01	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00002	<0.0001	<0.00002	<0.00002	-	<0.00005	-	<0.00002	<0.00001	<0.00002	<0.00005
SMGW-BH-B319	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	19-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	05-Sep-18	<0.05	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	-	<0.00005	-	<0.00001	<0.00001	<0.00001	<0.00005
WSA GW23	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	13-Dec-18	0.1	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	-	0.0001	-	<0.00001	<0.00001	<0.00001	<0.00005
WSA GW23	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	03-Apr-19	<0.05	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005
WSA GW23	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-C302	15-Apr-21	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-C302	12-May-21	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-C302	12-May-21	-	<4.0E-7	0.00000	<2.0E-7	0.00000	<2.0E-7	0.00000	0.00000	0.00000	<4.0E-7	-	0.000001	-	<4.0E-7	<2.0E-7	0.00000	-
SMGW-BH-C302	12-May-21	<0.005	0.00000	0.00000	0.00000	0.00000	1.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-B325	27-Apr-21	0.0851	0.000024	0.000008	0.000019	0.00000	0.000009	0.00000	<0.00005	<0.00001	0.00003	0.000008	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-B325	27-Apr-21	-	0.000035	0.00001	0.000014	0.00000	0.000009	0.00000	0.000004	0.000002	0.000018	-	0.000003	-	0.000002	0.000002	0.00000	-
SMGW-BH-B325	27-Apr-21	0.105	0.000027	0.000009	0.000024	0.00000	0.000012	0.00000	<0.00005	<0.00001	0.00003	0.000009	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-C343	20-Apr-21	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-C301	15-Apr-21	0.0054	0.000003	0.000001	0.000002	0.00000	4.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.000003	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B313	10-May-21	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-C340	20-Apr-21	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-B312	12-Feb-21	<0.005	0.00000	0.00000	0.00000	0.00000	2.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-B312	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B109	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B109	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A012	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A012	05-Sep-19	<0.05	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0002	<0.00005	<0.00005	-	-	-	<0.00005	<0.00005	<0.00005	<0.00012
SMGW-BH-B106	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B106	31-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B106	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B106	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A315	26-Apr-21	0.0144	0.00000	0.00000	0.00000	0.00000	4.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.000012	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-A315	26-Apr-21	-	<4.0E-7	0.00000	7.0E-7	0.00000	0.000002	0.00000	<0.00002	0.00000	0.000009	-	0.000021	-	0.000006	6.0E-7	0.00000	-
SMGW-BH-A315	26-Apr-21	0.0134	0.00000	0.00000	0.00000	0.00000	4.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.000011	0.00000	<0.00001	<0.00001	<0.00001	-
SMGW-BH-A017	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A017	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A017	20-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A017	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A017	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A017	05-Sep-19	<0.05	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0002	<0.00005	<0.00005	-	-	-	<0.00005	<0.00005	<0.00005	<0.00012
SMGW-BH-A310	21-Apr-21	0.0065	0.00000	0.00000	0.00000	0.00000	5.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.000006	0.00000	<0.00001	<0.00001	<0.00001	-

		Per and polyfluoroalkyl substances (continued)																	BTEX				
Location_Code	Sampled_Date	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE	N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtF	N-methylperfluorooctane sulfonamidoacetic acid (NM	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	Benzene	Toluene	Ethylbenzene	Total BTEX	Xylene (o)
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL		2E-05	2E-05	2E-05	2E-05	5E-05	2E-05	5E-05	5E-05	2E-05	2E-05	5E-05	5E-05	5E-05	5E-05	5E-05	1E-05	1E-05	1	2	2	1	2
Airport Regulations - Water pollution - accepted limits - fresh water																			300	300	140		
ANZG (2018) Freshwater 95% toxicant DGVs																			950				350
ANZG (2018) Freshwater 99% toxicant DGVs																			600				200
PFAS NEMP 2018 Table 5 Freshwater 99%																							
SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-D329	18-Feb-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	<1	<1	-	<1
SMGW-BH-D329	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
SMGW-BH-D208	17-May-21	<0.00002	<0.00002	<0.00002	<0.00002	<0.00005	<0.00002	<0.00005	<0.00005	<0.00002	<0.00002	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00001	<0.00001	<1	3	<2	3	<2
SMGW-BH-C305	20-Apr-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	10	<1	-	<1
SMGW-BH-C305	12-May-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.000012	<1	7	<1	-	<1
SMGW-BH-C304	20-Apr-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	<1	<1	-	<1
SMGW-BH-B120	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B120	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B320	15-Apr-21	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	1	<1	-	<1
SMGW-BH-B319	02-Mar-21	<0.00002	<0.00002	<0.00002	<0.00002	<0.00005	<0.00002	<0.00005	<0.00005	<0.00002	<0.00002	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00001	<0.00001	<1	<2	<2	<1	<2
SMGW-BH-B319	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
WSA GW23	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
WSA GW23	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	19-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
WSA GW23	05-Sep-18	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.0001	<1	<1	<1	-	<1
WSA GW23	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	13-Dec-18	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00001	<0.00001	<0.00001	0.0001	<1	<1	<1	-	<1
WSA GW23	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	03-Apr-19	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.0001	<1	<1	<1	-	<1
WSA GW23	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-C302	15-Apr-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	1	<1	-	<1
SMGW-BH-C302	12-May-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	<1	<1	-	<1
SMGW-BH-C302	12-May-21	0.00000	0.00000	0.00000	<0.00001	<0.00005	<0.00001	<0.00001	<0.00005	0.00000	0.00000	0.00000	0.00000	-	<4.0E-7	0.00000	<2.0E-7	0.000001	<0.1	<0.16	<0.1	<1	<0.1
SMGW-BH-C302	12-May-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	<1	<1	-	<1
SMGW-BH-B325	27-Apr-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.000028	0.000101	<2	84	<2	-	<2
SMGW-BH-B325	27-Apr-21	0.00000	0.00000	0.00000	<0.00001	<0.00005	<0.00001	<0.00001	<0.00005	0.00000	0.00000	0.00000	0.00000	-	<4.0E-7	0.00000	0.000023	0.0001	<1	100	<1	-	<1
SMGW-BH-B325	27-Apr-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.000036	0.000123	<2	78	<2	-	<2
SMGW-BH-C343	20-Apr-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	1	<1	-	<1
SMGW-BH-C301	15-Apr-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.000002	0.000009	<1	<1	<1	-	<1
SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B313	10-May-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	<1	<1	-	<1
SMGW-BH-C340	20-Apr-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	<1	<1	-	<1
SMGW-BH-B312	12-Feb-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	2	<1	-	<1
SMGW-BH-B312	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	5	<1	-	<1
SMGW-BH-B109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B109	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B109	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A012	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<2	<2	<1	<2
SMGW-BH-A012	05-Sep-19	<0.00005	<0.00005	<0.00005	<0.00005	<0.00012	<0.00005	<0.00012	<0.00012	<0.00005	<0.00005	<0.00012	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<1	<2	<2	<1	<2
SMGW-BH-B106	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B106	31-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B106	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B106	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A315	26-Apr-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.000014	<1	8	<1	-	<1
SMGW-BH-A315	26-Apr-21	0.00000	0.00000	0.00000	<0.00001	<0.00005	<0.00001	<0.00001	<0.00005	0.00000	0.00000	0.00000	0.00000	-	<4.0E-7	0.00000	0.000002	0.000034	<1	8	<1	-	<1
SMGW-BH-A315	26-Apr-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.000013	<1	8	<1	-	<1
SMGW-BH-A017	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	56	<2	56	<2
SMGW-BH-A017	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A017	20-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A017	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A017	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A017	05-Sep-19	<0.00005	<0.00005	<0.00005	<0.00005	<0.00012	<0.00005	<0.00012	<0.00012	<0.00005	<0.00005	<0.00012	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<1	51 - 56	<2	56	<2
SMGW-BH-A310	21-Apr-21	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.000006	<1	2	<1	-	<1

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Selenium (Filtered)	Strontium	Strontium (Filtered)	Tin (Filtered)	Vanadium	Vanadium (Filtered)	Zinc	Zinc (Filtered)	Sum of PFAS (WA DER List)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	6:2 Fluorotelomer Sulfonate (6:2 FTS)	Perfluorononanesulfonic acid (PFNS)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeF	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE	N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtF	N-methylperfluorooctane sulfonamidoacetic acid (NM	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	Benzene	Toluene	Ethylbenzene	Total BTEX	Xylene (o)
													Per and polyfluoroalkyl substances																																	BTEX				
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.01							0.005	0.01	2E-05	2E-05	2E-05	2E-05	1E-05	2E-05	0.0001	2E-05	2E-05				2E-05	1E-05	2E-05	5E-05	2E-05	2E-05	2E-05	2E-05	5E-05	2E-05	5E-05	5E-05	2E-05	2E-05	5E-05	5E-05	5E-05	5E-05	5E-05	1E-05	1E-05	1	2	2	1	2
Airport Regulations - Water pollution - accepted limits - fresh water					0.005						0.005	0.005																																			300	300	140		
ANZG (2018) Freshwater 95% toxicant DGVs					0.011						0.008	0.008																																			950				350
ANZG (2018) Freshwater 99% toxicant DGVs					0.005						0.0024	0.0024																																			600				200
PFAS NEMP 2018 Table 5 Freshwater 99%																		0.00000023									0.019																								
291737	6259191	Orchard Hills	SMGW-BH-A310S	26-Apr-21	-	1.9	2	-	<0.005	<0.005	0.3	0.27	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	49	<1	-	<1
291738	6248976	WSI	WSA GW19	28-Mar-17	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	3	<1	-	<1
291738	6248976	WSI	WSA GW19	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
291738	6248976	WSI	WSA GW19	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	04-Oct-17	-	-	-	-	-	-	-	0.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
291738	6248976	WSI	WSA GW19	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	19-Apr-18	-	-	-	-	-	-	-	0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	03-Jul-18	-	-	-	-	-	-	-	0.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
291738	6248976	WSI	WSA GW19	07-Sep-18	-	-	-	-	-	-	-	0.14	<0.05	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	-	<0.00005	-	<0.0000	<0.0000	<0.0000	<0.00005	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0001	-	-	-	-	-
291738	6248976	WSI	WSA GW19	14-Dec-18	-	-	-	-	-	-	-	0.14	0.07	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	-	0.00007	-	<0.0000	<0.0000	<0.0000	<0.00005	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0001	<1	<1	<1	-	<1
291738	6259051	Orchard Hills	SMGW-BH-A311	11-May-21	<0.001	4.7	5	-	<0.005	<0.005	0.054	0.041	<0.005	0.00000	0.00000	0.00000	0.00000	<3.0E-7	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	4	<1	-	<1
291769	6260026	Northern Tunnels	SMGW-BH-A123	28-May-20	<0.01	29.1	23.8	-	<0.01	<0.01	0.006	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	01-Jul-20	<0.01	19.3	20.3	-	<0.01	<0.01	0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	30-Jul-20	<0.01	18.1	17	-	<0.01	<0.01	0.007	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	20-Aug-20	<0.01	18.3	18.8	-	<0.01	<0.01	0.01	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	17-Feb-21	<0.01	22.7	23	-	<0.01	<0.01	0.045	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-May-20	<0.01	25.5	20.8	-	<0.01	<0.01	0.029	0.007	<0.01	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0001	<0.0000	<0.0000	-	<0.00005	-	<0.0000	<0.0000	<0.0000	<0.00005	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.00005	-	<0.00005	<0.00005	<0.0000	<0.0000	<1	5	<2	8	<2
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jun-20	<0.01	23.4	24.8	-	<0.01	<0.01	0.242	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jul-20	<0.01	31.3	29.1	-	<0.01	<0.01	0.088	0.016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	25-Aug-20	<0.01	27	28.6	-	<0.01	<0.01	0.197	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-Nov-20	<0.01	26.5	24.9	-	<0.01	<0.01	<0.005	0.363	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	15-Feb-21	<0.01	28	25.7	-	<0.01	<0.01	0.285	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291836	6257203	Luddenham Road	SMGW-BH-B309	02-Mar-21	<0.01	0.123	0.162	-	<0.01	<0.01	0.015	0.01	<0.01	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0001	<0.0000	<0.0000	-	<0.00005	-	<0.0000	<0.0000	<0.0000	<0.00005	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.00005	-	<0.00005	<0.00005	<0.0000	<0.0000	<1	<2	<2	<1	<2
291848	6248251	WSI	SMGW-BH-C341	20-Apr-21	-	-	-	-	-	-	-	0.14	<0.005	0.00000	0.00000	0.00000	0.00000	3.0E-7	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	6	<1	-	<1
291855	6258838	Orchard Hills	SMGW-BH-A117	26-May-20	<0.01	3.05	3.46	-	<0.01	<0.01	0.138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	29-Jun-20	<0.01	3.36	3.22	-	0.02	0.01	0.247	0.066	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	25-Aug-20	<0.01	3.36	2.96	-	<0.01	<0.01	0.187	0.154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	17-Feb-21	0.02	2.7	2.78	-	<0.01	<0.01	0.336	0.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-May-20	0.01	1.32	1.81	-	<0.01	<0.01	0.523	0.606	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jun-20	0.01	1.09	1.03	-	0.01	0.01	0.394	0.369	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jul-20	0.01	1.89	1.13	-	<0.01	<0.01	0.508	0.416	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-Aug-20	0.03	1.28	1.26	-	<0.01	<0.01	0.474	0.466	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	23-Feb-21	0.02	1.88	1.88	-	<0.01	<0.01	0.486	0.443	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	26-May-20	<0.01	12.9	12.9	-	<0.01	<0.01	0.022	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	17-Feb-21	<0.01	12.1	11.6	-	<0.01	<0.01	0.013	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jun-20	<0.01	36.4	36.1	-	<0.01	<0.01	0.053	0.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jul-20	<0.01	38.1	34.9	-	<0.01	<0.01	0.02	0.008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	20-Aug-20	<0.01	36.6	32.7	-	<0.01	<0.01	0.02	0.013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	17-Feb-21	<0.01	33.4	34.4	-	<0.01	<0.01	0.008	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jun-20	<0.01	13.8	12.6	-	<0.01	<0.01	0.009	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jul-20	<0.01	3.79	3.76	-	<0.01	<0.01	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	20-Aug-20	<0.01	3.72	3.35	-	<0.01	<0.01	0.016	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	17-Feb-21	<0.01	7.02	2.16	-	<0.01	<0.01	0.009	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291953	6260516	Northern Tunnels	SMGW-BH-A019	06-Sep-19	0.01	-	-	-	-	-	<0.005	<0.005	<0.05	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0002	<0.00005	<0.00005	-	-	-	<0.00005	<0.00005	<0.00005	<0.00012	<0.00005	<0.00005	<0.00005	<0.00005	<0.00012	<0.00005	<0.00012	<0.00012	<0.00005	<0.00005	<0.00012	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<1	<2	<2	<1	<2
292033	6257200	Luddenham Road	SMGW-BH-B308	02-Mar-21	<0.01	1.01	0.905	-	<0.01	<0.01	0.014	<0.005	<0.01	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0001	<0.0000	<0.0000	-	<0.00005	-	<0.0000	<0.0000	<0.0000	<0.00005	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.00005	-	<0.00005	<0.00005	<0.0000	<0.0000	<1	<2	<2	<1	<2
292037	6261297	Claremont Meadow	SMGW-BH-A109S	26-May-20	<0.01	0.348	0.325	-	<0.01	<0.01	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	30-Jun-20	<0.01	0.169	0.178	-	<0.01	<0.01	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	25-Aug-20	<0.01	0.235	0.24	-	<0.01	<0.01	0.007	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	17-Feb-21	<0.01	0.42	0.402	-	<0.01	<0.01	0.032	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	001 - 0.(	4.2 - 4.7	4.4	-	001 - 0.0	001 - 0.0	005 - 0.(	0.002	<0.005	0.00000	0.00000	0.00000	0.00000	0001 - 3	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	<1	<1	-	<1
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	0.002	4.9	4.4	-	0.015	0.015	0.009	<0.005	<0.005	0.00000	0.00000	0.00000	0.00000	<1.0E-7	0.00000	<0.0000	<0.0000	<0.0000	0.00000	0.00000	0.00000	<0.0000	<0.0000	<0.0000	-	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	<0.0000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	<1	<1	-	<1
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
292038	6261300	Claremont Meadow	SMGW-BH-A109	26-May-20	<0.01	10.5	11.2	-	<0.01	<0.01	0.013	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	30-Jun-20	<0.01	12.7	12.2	-	<0.01	<0.01	0.02	0.006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	25-Aug-20	<0.01	12.5	12.4	-	<0.01	<0.01	0.021	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	17-Feb-21	<0.01	13.6	13.5	-	<0.01	<0.01	0.036	0.008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	28-Mar-17	-	-	-	-	-	-	-	0.034	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
292130	6249000	WSI	WSA GW20	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
292130	6249000	WSI	WSA GW20	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	04-Oct-17	-	-	-	-	-	-	-	0.026	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
292130	6249000	WSI	WSA GW20	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	19-Dec-17	-	-	-	-	-	-	-	0.038	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
292130	6249000	WSI	WSA GW20	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	18-Apr-18	-	-	-	-	-	-	-	0.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1

														Per and polyfluoroalkyl substances																																		BTEX				
					Selenium (Filtered)	Strontium	Strontium (Filtered)	Tin (Filtered)	Vanadium	Vanadium (Filtered)	Zinc	Zinc (Filtered)	Sum of PFAS (WA DER List)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	6:2 Fluorotelomer Sulfonate (6:2 FTS)	Perfluorononanesulfonic acid (PFNS)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeF	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE	N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtF	N-methylperfluorooctane sulfonamidoacetic acid (NM	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	Benzene	Toluene	Ethylbenzene	Total BTEX	Xylene (o)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.01							0.005	0.01	2E-05	2E-05	2E-05	2E-05	1E-05	2E-05	0.0001	2E-05	2E-05				2E-05	1E-05	2E-05	5E-05	2E-05	2E-05	2E-05	2E-05	5E-05	2E-05	5E-05	5E-05	2E-05	2E-05	5E-05	5E-05	5E-05	5E-05	5E-05	1E-05	1E-05	1	2	2	1	2
Airport Regulations - Water pollution - accepted limits - fresh water					0.005						0.005	0.005																																			300	300	140		
ANZG (2018) Freshwater 95% toxicant DGVs					0.011						0.008	0.008																																			950				350
ANZG (2018) Freshwater 99% toxicant DGVs					0.005						0.0024	0.0024																																			600				200
PFAS NEMP 2018 Table 5 Freshwater 99%																		0.00000023									0.019																								
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
292130	6249000	WSI	WSA GW20	03-Jul-18	-	-	-	-	-	-	-	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	05-Sep-18	-	-	-	-	-	-	-	0.036	<0.05	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	-	<0.00005	-	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.0001	<1	<1	<1	-	<1
292130	6249000	WSI	WSA GW20	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Dec-18	-	-	-	-	-	-	-	0.033	0.4	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	-	0.0004	-	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00001	<0.00001	<0.00001	0.0004	<1	<1	<1	-	<1
292130	6249000	WSI	WSA GW20	03-Apr-19	-	-	-	-	-	-	-	0.033	<0.05	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.0001	<1	<1	<1	-	<1
292130	6249000	WSI	WSA GW20	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	28-Mar-17	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
292130	6249000	WSI	WSA GW21	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
292130	6249000	WSI	WSA GW21	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	04-Oct-17	-	-	-	-	-	-	-	0.029	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	19-Dec-17	-	-	-	-	-	-	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
292130	6249000	WSI	WSA GW21	21-Dec-17	-	-	-	-	-	-	-	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	18-Apr-18	-	-	-	-	-	-	-	0.043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Jul-18	-	-	-	-	-	-	-	<0.037	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
292130	6249000	WSI	WSA GW21	05-Sep-18	-	-	-	-	-	-	-	0.027	<0.05	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	-	<0.00005	-	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.0001	<1	<1	<1	-	<1
292130	6249000	WSI	WSA GW21	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Dec-18	-	-	-	-	-	-	-	0.03	<0.05	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	-	<0.00005	-	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.0001	<1	<1	<1	-	<1
292130	6249000	WSI	WSA GW21	03-Apr-19	-	-	-	-	-	-	-	0.045	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1
292130	6249000	WSI	WSA GW21	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	26-May-20	<0.01	18.4	20.5	-	<0.01	<0.01	0.022	0.016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	29-Jun-20	<0.01	17.8	17.3	-	<0.01	<0.01	0.055	0.018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	25-Aug-20	<0.01	21.5	16.8	-	<0.01	<0.01	0.026	0.016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	16-Feb-21	-	22.8	15.3	-	-	-	0.016	0.027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-May-20	<0.01	1.96	2.06	-	<0.01	<0.01	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	29-Jun-20	<0.01	1.73	1.66	-	<0.01	<0.01	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	<0.01	2.02	1.9	-	<0.01	<0.01	<0.005	0.007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	15-Feb-21	<0.01	2.36	2.21	-	<0.01	<0.01	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	<0.01	1.92	1.83	-	<0.01	<0.01	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	06-Sep-19	<0.01	-	-	-	-	-	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<2	<2	<1	<2
292892	6262062	Northern Tunnels	SMGW-BH-A011S	18-Dec-19	<0.01	0.848	0.827	-	<0.01	<0.01	<0.019	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Jan-20	<0.01	0.85	0.822	-	<0.01	<0.01	<0.009	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Apr-20	<0.01	1.42	1.41	-	<0.01	<0.01	0.012	0.008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	<0.01	0.723	0.761	-	<0.01	<0.01	0.019	0.008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	05-Sep-19	<0.01	-	-	-	-	-	-	<0.005	0.11	0.00003	<0.00002	0.00008	<0.00002	<0.00001	<0.00002	<0.0001	<0.00002	<0.00002	-	-	-	<0.00002	<0.00001	<0.00002	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00005	<0.00002	<0.00005	<0.00005	<0.00002	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00008	0.00011	<1	<2	<2	<1	<2
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	<0.01	0.708	0.704	-	<0.01	<0.01	0.023	0.008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	26-May-20	<0.01	8.79	9.24	-	<0.01	<0.01	0.023	0.008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	01-Jul-20	<0.01	8.67	8.6	-	<0.01	<0.01	0.051	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	25-Aug-20	<0.01	8.95	8.31	-	<0.01	<0.01	0.065	0.006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	16-Feb-21	<0.01	9.25	9.07	-	<0.01	<0.01	0.017	0.015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	26-May-20	<0.01	0.367	0.358	-	<0.01	<0.01	0.015	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	25-Aug-20	<0.01	0.345	0.343	-	<0.01	<0.01	0.013	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	16-Feb-21	<0.01	0.231	0.254	-	<0.01	<0.01	0.009	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Dec-20	<0.01	0.095	0.081	-	<0.01	<0.01	0.012	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Mar-21	<0.01	0.309	1.1	-	<0.01	<0.01	0.023	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	26-May-21	<0.01	0.803	0.23	-	0.01	<0.01	0.188	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	18-Mar-21	-	-	-	-	-	-	0.042	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Apr-21	-	-	-	-	-	-	-	-	<0.005	0.00000	0.00000	0.00000	0.00000	2.0E-7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.000001	0.00000	-	0.000002	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-	0.00000	0.00000	0.00000	0.00000	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Feb-21	<0.001	12	12	-	0.005	<0.005	0.033	0.021	<0.005	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	<1	<1	-	<1
294051	6261946	St Marys	SMGW-BH-A102	06-Mar-20	<0.01	1.79	1.82	-	<0.01	<0.01	0.013	0.011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	05-Jun-20	<0.01	1.38	1.27	-	<0.01	<0.01	0.024	0.022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	<0.01	1.11	1.05	-	<0.01	<0.01	0.078	0.071	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jul-20	<0.01	1.2	1.1	-	<0.01	<0.01	0.111	0.092	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	27-Aug-20	<0.01	1.36	1.27	-	<0.01	<0.01	0.09	0.078	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	<0.01	1.01	0.943	-	<0.01	<0.01	0.082	0.058	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	0.015	0.00000	0.00000	0.00000	0.00000	0.000001	0.00000	0.00000	0.00000	0.000001	0.00000	0.00000	0.00000	0.000001	0.000012	0.000001	-	0.000003	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-	0.00000	0.00000	0.000001	0.000019	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	4.0E-7	0.00000	0.000002	0.00000	0.000001	0.00000	<0.00002	0.00000	0.000002	-	0.000002	-	0.000001	0.000010	0.000002	-	0.000003	0.00000	0.00000	<0.00001	<0.00005	<0.00001	<0.00001	<0.00005	0.00000	0.00000	0.00000	0.00000	-	<4.0E-7	0.00000	0.000002	0.000029	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	0.0129	0.00000	0.00000	0.00000	0.00000	9.0E-7	0.00000	0.00000	0.00000	0.000001	0.00000	0.00000	0.00000	0.00000	0.000011	0.00000	-	0.000002	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-	0.00000	0.00000	0.00000	0.000014	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	<0.01	1.13	1.11	-	<0.01	-	0.086	0.077	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	<0.01	1.04	0.996	-	<0.01	<0.01	0.083	0.062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	18-Dec-19	<0.01	15.4	15.2	-	<0.01	<0.01	<0.025	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	24-Jan-20	<0.01	13.7	15.2	-	<0.01	<0.01	0.074	0.055	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Mar-20	<0.01	1.79	1.82	-	<0.01	<0.01	0.013	0.011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	20-Apr-20	<0.01	16.8	16.8	-	<0.01	<0.01	0.012	0.006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	27-Aug-20	<0.01	3.11	2.67	-	<0.01	<0.01	0.129	0.112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	<0.005	0.00000	0.00000	0.00000	0.00000	2.0E-7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-	0.00000	0.00000	0.00000	0.00000	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	0.000001	0.00000	2.0E-7	0.00000	3.0E-7	0.00000	0.000004	0.00000	7.0E-7	-	0.000002	-	<4.0E-7	6.0E-7	0.00000	-	0.00000	0.00000	0.00000	<0.00001	<0.00005	<0.00001	<0.00001	<0.00005	0.00000	0.00000	0.00000	0.00000	-	<4.0E-7	0.00000	5.0E-7	0.000008	-	-	-	-	-

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Selenium (Filtered)	Strontium	Strontium (Filtered)	Tin (Filtered)	Vanadium	Vanadium (Filtered)	Zinc	Zinc (Filtered)	Per and polyfluoroalkyl substances: Sum of PFAS (WA DER List)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	6:2 Fluorotelomer Sulfonate (6:2 FTS)	Perfluorononanesulfonic acid (PFNS)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeF	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (PFOSA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE	N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtF	N-methylperfluorooctane sulfonamidoacetic acid (NM	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum (PFHxS + PFOS)	Sum of PFASs (n=28)	BTEX: Benzene	Toluene	Ethylbenzene	Total BTEX	Xylene (o)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.01							0.005	0.01	2E-05	2E-05	2E-05	2E-05	1E-05	2E-05	0.0001	2E-05	2E-05				2E-05	1E-05	2E-05	5E-05	2E-05	2E-05	2E-05	2E-05	5E-05	2E-05	5E-05	5E-05	2E-05	2E-05	5E-05	5E-05	5E-05	5E-05	5E-05	1E-05	1E-05	1	2	2	1	2
Airport Regulations - Water pollution - accepted limits - fresh water					0.005						0.005	0.005																																			300	300	140		
ANZG (2018) Freshwater 95% toxicant DGVs					0.011						0.008	0.008																																			950				350
ANZG (2018) Freshwater 99% toxicant DGVs					0.005						0.0024	0.0024																																			600				200
PFAS NEMP 2018 Table 5 Freshwater 99%																		0.00000023									0.019																								
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	<0.005	0.00000	0.00000	0.00000	0.00000	2.0E-7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-	0.00000	0.00000	0.00000	0.00000	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	<0.01	-	-	-	-	-	-	0.026	<0.05	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0002	<0.00005	<0.00005	-	-	-	<0.00005	<0.00005	<0.00005	<0.00012	<0.00005	<0.00005	<0.00005	<0.00005	<0.00012	<0.00005	<0.00012	<0.00012	<0.00005	<0.00005	<0.00012	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<1	<2	<2	<1	<2
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	0.004	16	15	-	0.016	0.019	0.016	0.025	<0.005	0.00000	0.00000	0.00000	0.00000	3.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.00000	<1	2	<1	-	<1
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	<0.005	0.00000	0.00000	0.00000	0.00000	2.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	0.00000	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	0.0078	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	-	-	-	-	-	-	-	-	0.0059	0.00000	0.00000	0.00000	0.00000	.000001	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	.000001	.000005	<1	<1	<1	-	<1
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	0.0312	0.00000	0.00000	0.00000	0.00000	2.0E-7	0.00000	<0.00005	<0.00001	<0.00001	0.00000	0.00000	0.00000	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00000	-	0.00000	0.00000	0.00000	.000031	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	0.062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	<0.001	7.4	7.3	-	<0.005	<0.005	-	0.029	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	6.15	6.91	-	-	-	0.033	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	<0.01	6.83	7.13	-	0.01	<0.01	0.052	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	<0.01	5.44	4.88	-	<0.01	<0.01	0.017	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	<0.01	4.82	4.61	-	<0.01	<0.01	0.008	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	<0.01	3.02	3.75	-	<0.01	<0.01	0.011	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	<0.01	5.14	6.04	-	<0.01	<0.01	0.034	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

							Total Petroleum Hydrocarbons													Total Recoverable Hydrocarbons							Monocylic aromatic hydrocarbons										rbamat	Polycyclic Aromatic Hydr													
					Xylene (m & p)	Xylene Total	C6 - C9	C10 - C14	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	C15 - C28	C29 - C36	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	C10 - C36 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene	Styrene	Total MAH	Methiocarb	Benzo(a)pyrene TEQ	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene
					µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					2	2	0.02	0.05					0.1	0.05					0.05	0.02	0.02	0.1	0.1	0.1	0.1	0.1	5	5	5	5	5	5	5	5	5				0.5		0.0005	0.001		2	2	2	2	1	1	1	1
Airport Regulations - Water pollution - accepted limits - fresh water							0.15												0.6																																
ANZG (2018) Freshwater 95% toxicant DGVs																																																			
ANZG (2018) Freshwater 99% toxicant DGVs																																																			
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
288413	6246761	WSI	WSA GW06	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	15-Jun-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW06	06-Oct-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW06	18-Dec-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	<0.01	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW06	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	18-Apr-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	0.011	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
288413	6246761	WSI	WSA GW06	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Jul-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
288413	6246761	WSI	WSA GW06	06-Sep-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
288413	6246761	WSI	WSA GW06	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	12-Dec-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW06	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Apr-19	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	-	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
288413	6246761	WSI	WSA GW06	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	29-Mar-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	-	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW07	15-Jun-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW07	18-Dec-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	<0.01	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW07	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Apr-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
288413	6246761	WSI	WSA GW07	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Jul-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
288413	6246761	WSI	WSA GW07	06-Sep-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
288413	6246761	WSI	WSA GW07	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	13-Dec-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Apr-19	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	-	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
288413	6246761	WSI	WSA GW07	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	29-Mar-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	15-Jun-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
288574	6246161	WSI	WSA GW04	06-Oct-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Dec-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	<0.01	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
288574	6246161	WSI	WSA GW04	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Apr-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
288574	6246161	WSI	WSA GW04	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Jul-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
288574	6246161	WSI	WSA GW04	06-Sep-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
288574	6246161	WSI	WSA GW04	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	12-Dec-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Apr-19	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	-	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288838	6247416	WSI	SMGW-BH-C206	08-Sep-20	<2	<2	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.05	<0.05	<0.1	<0.05	-	<0.05	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	<0.004	-	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
288852	6246085	WSI	SMGW-BH-C002	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288852	6246085	WSI	SMGW-BH-C002	06-Sep-19	<2	<2	<0.02	<0.05	-	-	-	-	<0.1	<0.05	-	-	-	-	<0.05	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	<0.5	-	<0.0005	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
288878	6246774	WSI	SMGW-BH-C208	17-May-21	2	2	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.05	<0.05	<0.1	<0.05	-	<0.05	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	<0.004	-	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
288970	6246102	WSI	SMGW-BH-C001S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288970	6246102	WSI	SMGW-BH-C001S	06-Sep-19	<2 - 2	4	0.65	<0.05	-	-	-	-	<0.1	<0.05	-	-	-	-	<0.05	0.65	0.22	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	<0.5	-	<0.0005	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
289013	6246245	WSI	WSA GW08	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	29-Mar-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	15-Jun-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	-	<0.01	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
289013	6246245	WSI	WSA GW08	05-Oct-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Dec-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	<0.01	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
289013	6246245	WSI	WSA GW08	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Apr-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
289013	6246245	WSI	WSA GW08	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Jul-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
289013	6246245	WSI	WSA GW08	06-Sep-18	-	-	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
289013	6246245	WSI	WSA GW08	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	13-Dec-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date			Total Petroleum Hydrocarbons													Total Recoverable Hydrocarbons							Monocylic aromatic hydrocarbons										rbamat	Polycyclic Aromatic Hydr													
					Xylene (m & p)	Xylene Total	C6 - C9	C10 - C14	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	C15 - C28	C29 - C36	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	C10 - C36 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene	Styrene	Total MAH	Methiocarb	Benzo(a)pyrene TEQ	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene
					µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					2	2	0.02	0.05					0.1	0.05					0.05	0.02	0.02	0.1	0.1	0.1	0.1	0.1	5	5	5	5	5	5	5	5	5				0.5		0.0005	0.001		2	2	2	2	1	1	1	1
Airport Regulations - Water pollution - accepted limits - fresh water							0.15												0.6																																
ANZG (2018) Freshwater 95% toxicant DGVs																																																			
ANZG (2018) Freshwater 99% toxicant DGVs																																																			
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
289013	6246245	WSI	WSA GW08	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	-	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	-	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
289013	6246245	WSI	WSA GW08	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	07-Oct-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	02-Dec-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289220	6247060	WSI	SMGW-BH-C331	29-Apr-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	0.005	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
289414	6246914	WSI	SMGW-BH-C325	29-Apr-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	0.006	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
289595	6246615	WSI	SMGW-BH-C322	13-May-21	<2	<3	0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	0.012	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
289595	6246615	WSI	SMGW-BH-C322	13-May-21	<0.2	<1	0.061	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.05	0.066	0.031	<0.05	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.005	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
289595	6246615	WSI	SMGW-BH-C322	13-May-21	<10	<15	-	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	0.33	0.14	<0.05	<0.05	<0.1	<0.1	<0.1	<5	<5	<5	-	-	-	-	-	<5	0.19	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
289599	6245794	Bringelly	SMGW-BH-D303S	18-Feb-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
289599	6245794	Bringelly	SMGW-BH-D303S	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	17-Feb-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
289601	6245801	Bringelly	SMGW-BH-D303	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
289601	6245801	Bringelly	SMGW-BH-D303	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289629	6246535	WSI	SMGW-BH-C320	29-Apr-21	<2	<3	0.04	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	0.04	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	0.034	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<2	-	<0.01	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	-	<0.01	<0.01	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<0.005	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
289809	6246630	WSI	SMGW-BH-C321	13-May-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
290097	6245334	Bringelly	SMGW-BH-D305	15-Feb-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	0.003	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290274	6248345	WSI	SMGW-BH-C201S	27-Aug-20	<2	<2	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.05	<0.05	<0.1	<0.05	-	<0.05	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	-	-	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
290279	6248348	WSI	SMGW-BH-C201	03-Sep-20	<2	<2	<0.02	-	<0.1	<0.1	<0.1	<0.05	-	-	<0.05	<0.1	<0.05	-	-	<0.02	<0.02	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	-	-	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
290304	6247361	WSI	SMGW-BH-C351	21-Apr-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	0.004	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
290390	6244794	Southern Tunnels	SMGW-BH-D205	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	28-Mar-17	<2	<3	<0.02	0.07	-	-	-	-	0.1	<0.1	-	-	-	-	0.17	<0.02	<0.02	0.13	0.13	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	14-Jun-17	<2	<3	<0.02	0.63	-	-	-	-	0.5	<0.1	-	-	-	-	1.13	<0.02	<0.02	0.55	0.55	0.5	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
290461	6247764	WSI	WSA GW16	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Oct-17	<2	<3	<0.02	<0.05	-	-	-	-	0.2	<0.1	-	-	-	-	0.2	<0.02	<0.02	<0.05	<0.05	0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	17-Apr-18	<2	<3	<0.02	0.12	-	-	-	-	0.3	<0.1	-	-	-	-	0.42	<0.02	<0.02	0.19	0.19	0.3	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
290461	6247764	WSI	WSA GW16	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Jul-18	-	-	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
290461	6247764	WSI	WSA GW16	07-Sep-18	-	-	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	12-Dec-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	03-Apr-19	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	-	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
290461	6247764	WSI	WSA GW16	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290513	6244560	Southern Tunnels	SMGW-BH-D206	17-May-21	<2	<2	<0.02	0.05	<0.1	<0.1	<0.1	<0.05	2.08	0.68	<0.05	<0.1	<0.05	-	2.81	<0.02	<0.02	0.2	0.2	2.39	0.42	3.01	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	<0.004	-	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
290677	6244060	Aerotropolis	SMGW-BH-D322	15-Mar-21	<2	<3	0.08	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	<0.1	0.09	0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	0.044	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
290695	6243992	Aerotropolis	SMGW-BH-D324	22-Feb-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	0.003	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
290695	6243992	Aerotropolis	SMGW-BH-D324	15-Mar-21	<2	<3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	-	-	-	-	<1	0.005	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
290704	6243892	Aerotropolis	SMGW-BH-D326	18-Feb-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
290704	6243892	Aerotropolis	SMGW-BH-D326	16-Mar-21	<2	<3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
290715	6243914	Aerotropolis	SMGW-BH-D308	18-Feb-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	11-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	01-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	23-Feb-21	<2	<2	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.05	<0.05	<0.1	<0.05	-	<0.05	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	<0.004	-	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
290716	6244026	Aerotropolis	SMGW-BH-D207	01-Sep-20	<2	<2	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	<0.1	<0.05	<0.05	<0.1	<0.05	-	<0.05	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	<0.004	-	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

							Total Petroleum Hydrocarbons													Total Recoverable Hydrocarbons							Monocylic aromatic hydrocarbons										rbamat												Polycyclic Aromatic Hydr		
					Xylene (m & p)	Xylene Total	C6 - C9	C10 - C14	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	C15 - C28	C29 - C36	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	C10 - C36 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene	Styrene	Total MAH	Methiocarb	Benzo(a)pyrene TEQ	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene
					µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					2	2	0.02	0.05					0.1	0.05					0.05	0.02	0.02	0.1	0.1	0.1	0.1	0.1	5	5	5	5	5	5	5	5	5				0.5		0.0005	0.001		2	2	2	2	1	1	1	1
Airport Regulations - Water pollution - accepted limits - fresh water							0.15												0.6																																
ANZG (2018) Freshwater 95% toxicant DGVs																																																			
ANZG (2018) Freshwater 99% toxicant DGVs																																																			
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290720	6243765	Aerotropolis	SMGW-BH-D329	18-Feb-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
290720	6243765	Aerotropolis	SMGW-BH-D329	16-Mar-21	<2	<3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
290742	6243691	Aerotropolis	SMGW-BH-D208	17-May-21	<2	<2	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	0.1	<0.05	<0.05	<0.1	<0.05	-	0.1	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	<0.004	-	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
290762	6248715	WSI	SMGW-BH-C305	20-Apr-21	<2	<3	0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	0.01	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
290762	6248715	WSI	SMGW-BH-C305	12-May-21	<2	<3	<0.02	0.09	-	-	-	-	0.2	<0.1	-	-	-	-	0.29	<0.02	<0.02	0.08	0.08	0.2	<0.1	0.28	<1	<1	<1	-	-	-	-	-	<1	0.007	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
290945	6248669	WSI	SMGW-BH-C304	20-Apr-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
290964	6253779	Luddenham Road	SMGW-BH-B120	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290964	6253779	Luddenham Road	SMGW-BH-B120	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291041	6254012	Luddenham Road	SMGW-BH-B320	15-Apr-21	<2	<3	<0.02	<0.05	-	-	-	-	2.3	0.3	-	-	-	-	2.6	<0.02	<0.02	0.05	0.05	2.6	0.2	2.85	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.001	<5	<2	<2	<2	<2	<1	<1	<1	<1
291173	6254264	Luddenham Road	SMGW-BH-B319	02-Mar-21	<2	<2	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	0.15	0.11	<0.05	<0.1	<0.05	-	0.26	<0.02	<0.02	<0.1	<0.1	0.23	<0.1	0.23	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	<0.004	-	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
291173	6254264	Luddenham Road	SMGW-BH-B319	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	28-Mar-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
291265	6247780	WSI	WSA GW23	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Dec-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	<0.01	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
291265	6247780	WSI	WSA GW23	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Apr-18	-	-	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
291265	6247780	WSI	WSA GW23	03-Jul-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
291265	6247780	WSI	WSA GW23	05-Sep-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
291265	6247780	WSI	WSA GW23	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	13-Dec-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
291265	6247780	WSI	WSA GW23	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Apr-19	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	-	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	<2	<3	<0.02	-	-	-	-	<0	-	-	-	-	-	-	<0	<0.02	<0.02	-	-	-	-	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<2	<3	<0.02	0.1	-	-	-	-	0.1	<0.1	-	-	-	-	0.2	<0.02	<0.02	0.08	0.08	0.1	<0.1	0.18	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<0.2	<1	<0.01	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.05	<0.01	<0.01	<0.05	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.005	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<2	<3	<0.02	0.1	-	-	-	-	0.2	<0.1	-	-	-	-	0.3	<0.02	<0.02	0.09	0.09	0.2	<0.1	0.29	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<4	<6	0.08	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	0.09	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<2	<2	<2	-	-	-	-	-	<2	0.084	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<2	-	-	0.078	-	-	-	-	<0.1	<0.1	-	-	-	-	-	0.19	0.087	0.078	0.078	<0.1	<0.1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<0.00005	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<4	<6	0.09	<0.05	<0.05	<0.1	<0.1	<0.1	0.8	<0.1	<0.05	<0.1	<0.1	-	0.8	0.1	0.02	<0.05	<0.05	0.9	<0.1	0.9	<2	<2	<2	-	-	-	-	-	<2	0.078	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
291351	6247890	WSI	SMGW-BH-C343	20-Apr-21	<2	<3	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
291370	6249349	WSI	SMGW-BH-C301	15-Apr-21	<2	<3	<0.02	-	-	-	-	<0	-	-	-	-	-	-	<0	<0.02	<0.02	-	-	-	-	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291504	6255514	Luddenham Road	SMGW-BH-B313	10-May-21	<2	<3	<0.02	0.11	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	0.11	<0.02	<0.02	0.09	0.09	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.001	<5	<5	<5	<5	<5	<1	<1	<1	<1
291542	6248270	WSI	SMGW-BH-C340	20-Apr-21	<2	<3	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
291562	6255942	Luddenham Road	SMGW-BH-B312	12-Feb-21	<2	<3	<0.02	<0.05	-	-	-	-	0.3	<0.1	-	-	-	-	0.3	<0.02	<0.02	<0.05	<0.05	0.3	<0.1	0.3	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
291562	6255942	Luddenham Road	SMGW-BH-B312	16-Mar-21	<2	<3	<0.02	0.19	<0.05	<0.1	<0.1	0.1	<0.1	<0.1	<0.05	0.1	<0.1	-	0.19	<0.02	<0.1	0.17	0.17	<0.1	<0.1	0.17	<1	<1	<1	-	-	-	-	-	<1	0.005	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
291572	6256049	Luddenham Road	SMGW-BH-B109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	<2	<2	<0.02	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	<2	<2	<0.02	<0.05	-	-	-	-	<0.1	<0.05	-	-	-	-	<0.05	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	<0.5	-	<0.0005	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
291703	6256950	Luddenham Road	SMGW-BH-B106	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	31-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	0.008	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<2	-	0.034	<0.05	-	-	-	-	0.11	<0.1	-	-	-	-	0.11	0.048	0.04	0.077	0.077	<0.1	<0.1	0.077	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<0.00005	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<2	<3	<0.02	<0.05	-	-	-	-	0.2	<0.1	-	-	-	-	0.2	<0.02	<0.02	<0.05	<0.05	0.2	<0.1	0.2	<1	<1	<1	-	-	-	-	-	<1	0.008	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	<2	<2	0.1	-	-	-	-	-	-	-	-	-	-	0.09	-	-	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	<2	<2	0.1	<0.05	-	-	-	-	<0.1	<0.05	-	-	-	-	<0.05	0.09	0.03	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	<0.5	-	<0.0005	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
291737	6259192	Orchard Hills	SMGW-BH-A310	21-Apr-21	<2	<3	<0.02	0.06	-	-	-	-	0.2	<0.1	-	-	-	-	0.26	0.02	<0.02	<0.05	<0.05	0.2	<0.1	0.2	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1

							Total Petroleum Hydrocarbons													Total Recoverable Hydrocarbons							Monocylic aromatic hydrocarbons										rbamat	Polycyclic Aromatic Hydr													
					Xylene (m & p)	Xylene Total	C6 - C9	C10 - C14	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	C15 - C28	C29 - C36	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	C10 - C36 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene	Styrene	Total MAH	Methiocarb	Benzo(a)pyrene TEQ	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene
					µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					2	2	0.02	0.05					0.1	0.05					0.05	0.02	0.02	0.1	0.1	0.1	0.1	0.1	5	5	5	5	5	5	5	5	5				0.5		0.0005	0.001		2	2	2	2	1	1	1	1
Airport Regulations - Water pollution - accepted limits - fresh water							0.15												0.6																																
ANZG (2018) Freshwater 95% toxicant DGVs																																																			
ANZG (2018) Freshwater 99% toxicant DGVs																																																			
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
291737	6259191	Orchard Hills	SMGW-BH-A310S	26-Apr-21	<2	<3	0.12	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	0.1	0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	0.049	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
291738	6248976	WSI	WSA GW19	28-Mar-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
291738	6248976	WSI	WSA GW19	14-Jun-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	04-Oct-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	<0.05	-	-	-	-		-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	19-Apr-18	-	-	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
291738	6248976	WSI	WSA GW19	03-Jul-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
291738	6248976	WSI	WSA GW19	07-Sep-18	-	-	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	14-Dec-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6259051	Orchard Hills	SMGW-BH-A311	11-May-21	<2	<3	0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	<0.1	0.05	0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	0.004	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
291769	6260026	Northern Tunnels	SMGW-BH-A123	28-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-May-20	3	3	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	0.3	<0.05	<0.05	<0.1	<0.05	-	0.3	<0.02	<0.02	0.28	0.28	<0.1	<0.1	0.28	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	<0.004	-	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291836	6257203	Luddenham Road	SMGW-BH-B309	02-Mar-21	<2	<2	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	0.15	0.12	<0.05	<0.1	<0.05	-	0.27	<0.02	<0.02	<0.1	<0.1	0.23	<0.1	0.23	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
291848	6248251	WSI	SMGW-BH-C341	20-Apr-21	<2	<3	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
291855	6258838	Orchard Hills	SMGW-BH-A117	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291953	6260516	Northern Tunnels	SMGW-BH-A019	06-Sep-19	<2	<2	<0.02	<0.05	-	-	-	-	<0.1	<0.05	-	-	-	<0.02	<0.05	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	<0.5	-	<0.0005	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
292033	6257200	Luddenham Road	SMGW-BH-B308	02-Mar-21	<2	<2	<0.02	<0.05	<0.1	<0.1	<0.1	<0.05	0.26	0.27	<0.05	<0.1	<0.05	-	0.53	<0.02	<0.02	<0.1	<0.1	0.45	0.16	0.61	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
292037	6261297	Claremont Meadow	SMGW-BH-A109S	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	<2	<3	<0.01	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.01	<0.01	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.003	-	<0.005	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	<2	<3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.1	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.001	<5	<5	<5	<5	<5	<1	<1	<1	<1
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	<2	<3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
292038	6261300	Claremont Meadow	SMGW-BH-A109	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	28-Mar-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Jun-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
292130	6249000	WSI	WSA GW20	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	04-Oct-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	19-Dec-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	<0.01	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
292130	6249000	WSI	WSA GW20	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	18-Apr-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01

							Total Petroleum Hydrocarbons													Total Recoverable Hydrocarbons							Monocylic aromatic hydrocarbons										rbamat													Polycyclic Aromatic Hydr
					Xylene (m & p)	Xylene Total	C6 - C9	C10 - C14	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	C15 - C28	C29 - C36	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	C10 - C36 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene	Styrene	Total MAH	Methiocarb	Benzo(a)pyrene TEQ	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene
					µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					2	2	0.02	0.05					0.1	0.05					0.05	0.02	0.02	0.1	0.1	0.1	0.1	0.1	5	5	5	5	5	5	5	5	5				0.5		0.0005	0.001		2	2	2	2	1	1	1	1
Airport Regulations - Water pollution - accepted limits - fresh water							0.15												0.6																																
ANZG (2018) Freshwater 95% toxicant DGVs																																																			
ANZG (2018) Freshwater 99% toxicant DGVs																																																			
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
292130	6249000	WSI	WSA GW20	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
292130	6249000	WSI	WSA GW20	05-Sep-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
292130	6249000	WSI	WSA GW20	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Dec-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	03-Apr-19	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	-	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	28-Mar-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
292130	6249000	WSI	WSA GW21	14-Jun-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	19-Dec-17	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	<0.01	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
292130	6249000	WSI	WSA GW21	21-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	18-Apr-18	-	-	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
292130	6249000	WSI	WSA GW21	03-Jul-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	-	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
292130	6249000	WSI	WSA GW21	05-Sep-18	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
292130	6249000	WSI	WSA GW21	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Dec-18	<2	<3	<0.02	0.2	-	-	-	-	0.8	0.1	-	-	-	-	1.1	<0.02	<0.02	0.25	0.25	0.8	<0.1	1.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Apr-19	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.02	<0.05	-	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	06-Sep-19	<2	<2	<0.02	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	<0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	05-Sep-19	<2	<2	<0.02	<0.05	-	-	-	-	<0.1	<0.05	-	-	-	-	<0.05	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	<0.5	-	<0.0005	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Dec-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
293999	6261951	St Marys	SMGW-BH-A302	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Feb-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.02	<0.1	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
294051	6261946	St Marys	SMGW-BH-A102	06-Mar-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	05-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	24-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Mar-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date			Total Petroleum Hydrocarbons													
					Xylene (m & p)	Xylene Total	C6 - C9	C10 - C14	TRH >C10-C16 (after silica gel clean-up)	TRH >C16-C34 (after silica gel clean-up)	TRH >C34-C40 (after silica gel clean-up)	TRH C10-C36 (Total) (after silica gel clean-up)	C15 - C28	C29 - C36	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C6 - C10 Fraction	C10 - C36 (Sum of total)
					µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL					2	2	0.02	0.05					0.1	0.05					0.05
Airport Regulations - Water pollution - accepted limits - fresh water							0.15												0.6
ANZG (2018) Freshwater 95% toxicant DGVs																			
ANZG (2018) Freshwater 99% toxicant DGVs																			
PFAS NEMP 2018 Table 5 Freshwater 99%																			
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	<2	<2	<0.02	<0.05	-	-	-	-	<0.1	<0.05	-	-	-	-	<0.05
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	<2	<3	<0.02	<0.05	-	-	-	-	0.3	<0.1	-	-	-	-	0.3
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	<2	<3	<0.02	<0.05	-	-	-	-	<0.1	<0.1	-	-	-	-	<0.1
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Total Recoverable Hydrocarbons							Monocylic aromatic hydrocarbons									
					F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	tert-butylbenzene	Styrene	Total MAH
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
EQL					0.02	0.02	0.1	0.1	0.1	0.1	0.1	5	5	5	5	5	5	5	5	5	
Airport Regulations - Water pollution - accepted limits - fresh water																					
ANZG (2018) Freshwater 95% toxicant DGVs																					
ANZG (2018) Freshwater 99% toxicant DGVs																					
PFAS NEMP 2018 Table 5 Freshwater 99%																					
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	-
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	<0.02	<0.02	0.05	0.05	0.3	<0.1	0.35	<1	<1	<1	-	-	-	-	-	<1	<0.003
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<1	<1	-	-	-	-	-	<1	<0.003
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	rbamat	Polycyclic Aromatic Hydr													
					Methiocarb	Benzo(a)pyrene TEQ	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene
					µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL							0.5		0.0005	0.001		2	2	2	2	1	1	1	1
Airport Regulations - Water pollution - accepted limits - fresh water																			
ANZG (2018) Freshwater 95% toxicant DGVs																			
ANZG (2018) Freshwater 99% toxicant DGVs																			
PFAS NEMP 2018 Table 5 Freshwater 99%																			
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	-	-	<0.5	-	<0.0005	<0.001	-	<2	<2	<2	<2	<1	<1	<1	<1
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	<0.0000	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	-	-	-	-	-	<0.001	-	-	-	-	-	<1	<1	<1	<1
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	<0.0000	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

					ocarbons												Chlorinated Hydrocarbons																																		
					Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	Chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2-Dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene
					μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	mg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L
EQL					0.5	1	1	1	1	1	1	1	1	1	1			5	5	5	5	5	5	5		5	5	5	5	5	5			5	5	5	5	50	5	50	5	5	5		2	10	2	5	5	5	5
Airport Regulations - Water pollution - accepted limits - fresh water																3																													0.1						
ANZG (2018) Freshwater 95% toxicant DGVs													16								6500																										360				
ANZG (2018) Freshwater 99% toxicant DGVs													2.5								5400																										290				
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
288413	6246761	WSI	WSA GW06	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-17	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	15-Jun-17	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	06-Oct-17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW06	18-Dec-17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	-	<0.5	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW06	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	18-Apr-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	0.01	<0.01	0.19	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW06	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Jul-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	06-Sep-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	0.02	-	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	12-Dec-18	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW06	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Apr-19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	29-Mar-17	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW07	15-Jun-17	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	06-Oct-17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Dec-17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	-	<0.5	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW07	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Apr-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Jul-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW07	06-Sep-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	13-Dec-18	-	-	-	-	-	-	-	-	<10	-	-	-	<5	<1	<1	<1	<1	<1	<1	-	<2	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW07	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Apr-19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
288413	6246761	WSI	WSA GW07	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	29-Mar-17	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	15-Jun-17	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	06-Oct-17	-	-	-	-	-	-	-	-	<10	-	-	-	<5	<1	<1	<1	<1	<1	<1	-	<0.5	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
288574	6246161	WSI	WSA GW04	18-Dec-17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	-	<0.5	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
288574	6246161	WSI	WSA GW04	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Apr-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	0.03	<0.01	0.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Jul-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
288574	6246161	WSI	WSA GW04	06-Sep-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	0.01	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
288574	6246161	WSI	WSA GW04	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	12-Dec-18	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Apr-19	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288838	6247416	WSI	SMGW-BH-C206	08-Sep-20	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
288852	6246085	WSI	SMGW-BH-C002	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288852	6246085	WSI	SMGW-BH-C002	06-Sep-19	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
288878	6246774	WSI	SMGW-BH-C208	17-May-21	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
288970	6246102	WSI	SMGW-BH-C001S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288970	6246102	WSI	SMGW-BH-C001S	06-Sep-19	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	-	-	-	<5	<5	<5	<5
289013	6246245	WSI	WSA GW08	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	29-Mar-17	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	15-Jun-17	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	<4	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
289013	6246245	WSI	WSA GW08	05-Oct-17	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Dec-17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	-	<0.5	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
289013	6246245	WSI	WSA GW08	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Apr-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Jul-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
289013	6246245	WSI	WSA GW08	06-Sep-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	13-Dec-18	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1

					ocarbons												Chlorinated Hydrocarbons																																		
					Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	Chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2-Dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.5	1	1	1	1	1	1	1	1	1	1			5	5	5	5	5	5	5		5	5	5	5	5	5			5	5	5	5	50	5	50	5	5	5		2	10	2	5	5	5	5
Airport Regulations - Water pollution - accepted limits - fresh water																3																													0.1						
ANZG (2018) Freshwater 95% toxicant DGVs													16								6500																										360				
ANZG (2018) Freshwater 99% toxicant DGVs													2.5								5400																										290				
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
289013	6246245	WSI	WSA GW08	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	07-Oct-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	02-Dec-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289220	6247060	WSI	SMGW-BH-C331	29-Apr-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
289414	6246914	WSI	SMGW-BH-C325	29-Apr-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.02	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
289595	6246615	WSI	SMGW-BH-C322	13-May-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	0.09	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	0.03	-	-	-	<0.01	<0.02	<1	<1
289595	6246615	WSI	SMGW-BH-C322	13-May-21	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.5	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.1	<0.5	-	-	-	-	<0.1	<0.1	<0.1	<0.1
289595	6246615	WSI	SMGW-BH-C322	13-May-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<5	<5	<5	<5	<5	<5	-	-	<5	-	<5	<5	<5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	<5	<5	<5	<5
289599	6245794	Bringelly	SMGW-BH-D303S	18-Feb-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
289599	6245794	Bringelly	SMGW-BH-D303S	15-Mar-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	17-Feb-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
289601	6245801	Bringelly	SMGW-BH-D303	15-Mar-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289629	6246535	WSI	SMGW-BH-C320	29-Apr-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.02	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<10	<1	<10	<1	<1	<1	-	<1	-	-	<1	<1	<1	<1
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.01	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
289809	6246630	WSI	SMGW-BH-C321	13-May-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<0.01	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	<0.02	-	-	-	<0.01	<0.02	<1	<1
290097	6245334	Bringelly	SMGW-BH-D305	15-Feb-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290274	6248345	WSI	SMGW-BH-C201S	27-Aug-20	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
290279	6248348	WSI	SMGW-BH-C201	03-Sep-20	<0.5	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	1.8	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
290304	6247361	WSI	SMGW-BH-C351	21-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
290390	6244794	Southern Tunnels	SMGW-BH-D205	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	28-Mar-17	-	-	-	-	-	-	-	-	<10	-	-	-	-	<1	<1	<1	<1	<1	<1	-	<0.1	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
290461	6247764	WSI	WSA GW16	14-Jun-17	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Oct-17	-	-	-	-	-	-	-	-	<10	-	-	-	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
290461	6247764	WSI	WSA GW16	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	17-Apr-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<10	0.13	0.03	0.39	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
290461	6247764	WSI	WSA GW16	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Jul-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	07-Sep-18	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	12-Dec-18	-	-	-	-	-	-	-	-	<10	-	-	-	<5	<1	<1	<1	<1	<1	<1	-	<2	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
290461	6247764	WSI	WSA GW16	03-Apr-19	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290513	6244560	Southern Tunnels	SMGW-BH-D206	17-May-21	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
290677	6244060	Aerotropolis	SMGW-BH-D322	15-Mar-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<0.01	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	0.13	-	-	-	<0.01	<0.02	<1	<1
290695	6243992	Aerotropolis	SMGW-BH-D324	22-Feb-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
290695	6243992	Aerotropolis	SMGW-BH-D324	15-Mar-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<1	<1	<1	<1	<0.01	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	<0.02	-	-	-	<0.01	<0.02	<1	<1
290704	6243892	Aerotropolis	SMGW-BH-D326	18-Feb-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
290704	6243892	Aerotropolis	SMGW-BH-D326	16-Mar-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<1	<1	<1	<1	<0.01	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	0.19	-	-	-	<0.01	<0.02	<1	<1
290715	6243914	Aerotropolis	SMGW-BH-D308	18-Feb-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	11-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	01-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	23-Feb-21	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
290716	6244026	Aerotropolis	SMGW-BH-D207	01-Sep-20	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

					ocarbons											
					Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.5	1	1	1	1	1	1	1	1	1	1	
Airport Regulations - Water pollution - accepted limits - fresh water																3
ANZG (2018) Freshwater 95% toxicant DGVs													16			
ANZG (2018) Freshwater 99% toxicant DGVs													2.5			
PFAS NEMP 2018 Table 5 Freshwater 99%																
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date												
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-
290720	6243765	Aerotropolis	SMGW-BH-D329	18-Feb-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
290720	6243765	Aerotropolis	SMGW-BH-D329	16-Mar-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
290742	6243691	Aerotropolis	SMGW-BH-D208	17-May-21	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
290762	6248715	WSI	SMGW-BH-C305	20-Apr-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
290762	6248715	WSI	SMGW-BH-C305	12-May-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
290945	6248669	WSI	SMGW-BH-C304	20-Apr-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
290964	6253779	Luddenham Road	SMGW-BH-B120	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-
290964	6253779	Luddenham Road	SMGW-BH-B120	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-
291041	6254012	Luddenham Road	SMGW-BH-B320	15-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
291173	6254264	Luddenham Road	SMGW-BH-B319	02-Mar-21	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
291173	6254264	Luddenham Road	SMGW-BH-B319	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	28-Mar-17	-	-	-	-	-	-	-	-	<10	-	-	-
291265	6247780	WSI	WSA GW23	04-Oct-17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
291265	6247780	WSI	WSA GW23	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Dec-17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
291265	6247780	WSI	WSA GW23	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Apr-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	0.02
291265	6247780	WSI	WSA GW23	03-Jul-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01
291265	6247780	WSI	WSA GW23	05-Sep-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01
291265	6247780	WSI	WSA GW23	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	13-Dec-18	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1
291265	6247780	WSI	WSA GW23	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Apr-19	-	-	-	-	-	-	-	-	<10	-	-	-
291265	6247780	WSI	WSA GW23	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.05	<0.01	<0.01	0.07
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	-
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.08	<0.01	<0.01	0.1
291351	6247890	WSI	SMGW-BH-C343	20-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
291370	6249349	WSI	SMGW-BH-C301	15-Apr-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-
291504	6255514	Luddenham Road	SMGW-BH-B313	10-May-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
291542	6248270	WSI	SMGW-BH-C340	20-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
291562	6255942	Luddenham Road	SMGW-BH-B312	12-Feb-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
291562	6255942	Luddenham Road	SMGW-BH-B312	16-Mar-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
291572	6256049	Luddenham Road	SMGW-BH-B109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	-	-	-	-	-	-	-	-	<1	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
291703	6256950	Luddenham Road	SMGW-BH-B106	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	31-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<0.01	<0.01	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	-	-	-	-	-	-	-	-	<1	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
291737	6259192	Orchard Hills	SMGW-BH-A310	21-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

		Chlorinated Hydrocarbons																																		
		Chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2-Dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			5	5	5	5	5	5	5		5	5	5	5	5	5			5	5	5	5	50	5	50	5	5	5		2	10	2	5	5	5	5
Airport Regulations - Water pollution - accepted limits - fresh water																														0.1						
ANZG (2018) Freshwater 95% toxicant DGVs						6500																										360				
ANZG (2018) Freshwater 99% toxicant DGVs						5400																										290				
PFAS NEMP 2018 Table 5 Freshwater 99%																																				
Location_Code	Sampled_Date																																			
SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-D329	18-Feb-21	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
SMGW-BH-D329	16-Mar-21	-	<1	<1	<1	<1	<0.01	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	0.21	-	-	-	<0.01	<0.02	<1	<1
SMGW-BH-D208	17-May-21	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
SMGW-BH-C305	20-Apr-21	-	<1	<1	<1	<1	0.03	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	<0.02	-	-	-	<0.01	<0.02	<1	<1
SMGW-BH-C305	12-May-21	-	<1	<1	<1	<1	0.06	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	<0.02	-	-	-	<0.01	<0.02	<1	<1
SMGW-BH-C304	20-Apr-21	-	<1	<1	<1	<1	0.04	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	<0.02	-	-	-	<0.01	<0.02	<1	<1
SMGW-BH-B120	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B120	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B320	15-Apr-21	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	<0.005	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<2	<4	<2	<1	<1	<1	<1
SMGW-BH-B319	02-Mar-21	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
SMGW-BH-B319	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	28-Mar-17	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	04-Oct-17	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	19-Dec-17	<5	<1	<1	<1	<1	<1	<1	-	<0.5	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
WSA GW23	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	19-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	05-Sep-18	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
WSA GW23	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	13-Dec-18	-	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WSA GW23	03-Apr-19	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
WSA GW23	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-C302	15-Apr-21	-	<1	<1	<1	<1	<0.01	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	<0.02	-	-	-	<0.01	<0.02	<1	<1
SMGW-BH-C302	12-May-21	-	<1	<1	<1	<1	<0.01	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	<0.02	-	-	-	<0.01	<0.02	<1	<1
SMGW-BH-C302	12-May-21	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.5	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.1	<0.5	-	-	-	-	<0.1	<0.1	<0.1	<0.1
SMGW-BH-C302	12-May-21	-	<1	<1	<1	<1	<0.01	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	<0.02	-	-	-	<0.01	<0.02	<1	<1
SMGW-BH-B325	27-Apr-21	-	<2	<2	<2	<2	<2	<2	-	-	<2	-	<2	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<5	<2	<2	<2	<2	<2	-	-	-	<2	<2	<2	<2
SMGW-BH-B325	27-Apr-21	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<10	<1	<10	<1	<1	<1	-	<1	-	-	<1	<1	<1	<1
SMGW-BH-B325	27-Apr-21	-	<2	<2	<2	<2	<2	<2	-	-	<2	-	<2	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<5	<2	<2	<2	<2	<2	-	-	-	<2	<2	<2	<2
SMGW-BH-C343	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-C301	15-Apr-21	-	<1	<1	<1	<1	<0.01	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	<0.02	-	-	-	<0.01	<0.02	<1	<1
SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B313	10-May-21	-	<1	<1	<1	<1	<0.01	<1	-	-	<1	-	<0.01	<1	<1	-	<0.005	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	0.09	<5	<5	<5	<0.01	<0.02	<1	<1
SMGW-BH-C340	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B312	12-Feb-21	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
SMGW-BH-B312	16-Mar-21	-	<1	<1	<1	<1	<0.01	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	<0.02	-	-	-	<0.01	<0.02	<1	<1
SMGW-BH-B109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B109	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B109	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A012	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A012	05-Sep-19	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
SMGW-BH-B106	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B106	31-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B106	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-B106	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A315	26-Apr-21	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
SMGW-BH-A315	26-Apr-21	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<10	<1	<10	<1	<1	<1	-	<1	-	-	<1	<1	<1	<1
SMGW-BH-A315	26-Apr-21	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
SMGW-BH-A017	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A017	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A017	20-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A017	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A017	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SMGW-BH-A017	05-Sep-19	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
SMGW-BH-A310	21-Apr-21	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	9	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	Chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2-Dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene
					ocarbons												Chlorinated Hydrocarbons																																		
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.5	1	1	1	1	1	1	1	1	1	1			5	5	5	5	5	5	5		5	5	5	5	5	5			5	5	5	5	50	5	50	5	5	5		2	10	2	5	5	5	5
Airport Regulations - Water pollution - accepted limits - fresh water																3																													0.1						
ANZG (2018) Freshwater 95% toxicant DGVs													16								6500																										360				
ANZG (2018) Freshwater 99% toxicant DGVs													2.5								5400																										290				
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
291737	6259191	Orchard Hills	SMGW-BH-A310S	26-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
291738	6248976	WSI	WSA GW19	28-Mar-17	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	14-Jun-17	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	04-Oct-17	-	-	-	-	-	-	-	-	<10	-	-	-	<5	<1	<1	<1	<1	<1	<1	-	<0.5	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
291738	6248976	WSI	WSA GW19	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	19-Apr-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	0.37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	03-Jul-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
291738	6248976	WSI	WSA GW19	07-Sep-18	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	14-Dec-18	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6259051	Orchard Hills	SMGW-BH-A311	11-May-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<0.01	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	55	<1	<0.01	<1	<1	3.7	-	-	-	<0.01	<0.02	<1	<1
291769	6260026	Northern Tunnels	SMGW-BH-A123	28-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-May-20	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291836	6257203	Luddenham Road	SMGW-BH-B309	02-Mar-21	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<5	-	-	<5	<5	<5	<5
291848	6248251	WSI	SMGW-BH-C341	20-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291953	6260516	Northern Tunnels	SMGW-BH-A019	06-Sep-19	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
292033	6257200	Luddenham Road	SMGW-BH-B308	02-Mar-21	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<5	-	-	<5	<5	<5	<5
292037	6261297	Claremont Meadow	SMGW-BH-A109S	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<1	<1	<1	<1
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<1	<1	<1	<1	<0.01	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	<0.02	-	-	-	<0.01	<0.02	<1	<1
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	<0.005	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<5	<5	<5	<1	<1	<1	<1
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<1	<1	<1	<1	<0.01	<1	-	-	<1	-	<0.01	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	<0.02	-	-	-	-	<0.02	<1	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	28-Mar-17	-	-	-	-	-	-	-	-	<10	-	-	-	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
292130	6249000	WSI	WSA GW20	14-Jun-17	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	-	-	-	-	-	-	-	-	<4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	04-Oct-17	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	19-Dec-17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	-	<0.5	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
292130	6249000	WSI	WSA GW20	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	18-Apr-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<10	0.08	<0.01	0.13	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1

					ocarbons												Chlorinated Hydrocarbons																																		
					Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	Chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2-Dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.5	1	1	1	1	1	1	1	1	1	1			5	5	5	5	5	5	5		5	5	5	5	5	5			5	5	5	5	50	5	50	5	5	5		2	10	2	5	5	5	5
Airport Regulations - Water pollution - accepted limits - fresh water																3																													0.1						
ANZG (2018) Freshwater 95% toxicant DGVs													16								6500																										360				
ANZG (2018) Freshwater 99% toxicant DGVs													2.5								5400																										290				
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
292130	6249000	WSI	WSA GW20	03-Jul-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	-	0.08	<0.01	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	05-Sep-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
292130	6249000	WSI	WSA GW20	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Dec-18	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	03-Apr-19	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	28-Mar-17	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Jun-17	-	-	-	-	-	-	-	-	<10	-	-	-	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
292130	6249000	WSI	WSA GW21	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	19-Dec-17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	-	<0.5	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
292130	6249000	WSI	WSA GW21	21-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	18-Apr-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	0.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Jul-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
292130	6249000	WSI	WSA GW21	05-Sep-18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<10	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Dec-18	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Apr-19	-	-	-	-	-	-	-	-	<10	-	-	-	<5	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
292130	6249000	WSI	WSA GW21	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	06-Sep-19	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	05-Sep-19	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Dec-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	18-Mar-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Feb-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
294051	6261946	St Marys	SMGW-BH-A102	06-Mar-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	05-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	24-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Mar-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

					ocarbons											
					Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.5	1	1	1	1	1	1	1	1	1	1	
Airport Regulations - Water pollution - accepted limits - fresh water																3
ANZG (2018) Freshwater 95% toxicant DGVs													16			
ANZG (2018) Freshwater 99% toxicant DGVs													2.5			
PFAS NEMP 2018 Table 5 Freshwater 99%																
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date												
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.04	<0.01	0.02	0.07
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	0.2	0.23
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-

					Chlorinated Hydrocarbons																																		
					Chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2-Dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Benzyl chloride	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL						5	5	5	5	5	5	5		5	5	5	5	5	5			5	5	5	5	50	5	50	5	5	5		2	10	2	5	5	5	5
Airport Regulations - Water pollution - accepted limits - fresh water																																	0.1						
ANZG (2018) Freshwater 95% toxicant DGVs									6500																										360				
ANZG (2018) Freshwater 99% toxicant DGVs									5400																										290				
PFAS NEMP 2018 Table 5 Freshwater 99%																																							
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																			
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	-	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<50	<5	<50	<5	<5	<5	-	<2	<10	<2	<5	<5	<5	<5
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	-	<1	<1	<1	<1	<1	<1	-	-	<1	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-	-	<1	<1	<1	<1
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

							Halogenated Hydrocarbons					Halogenated Benzenes															Explosives			Field						Phenols															
					Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	Pentachlorobenzene	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene	TDS (Field)	DO (Field)	DO (Field) (Filtered)	Redox Potential (Field)	Temp (Field)	pH (Field)	3/4-Methylphenol (m/p-cresol)	2,3,4,6-Tetrachlorophenol	2,4-Dinitrophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mV	oC	-	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					50		5	50	50	5	50				5		2	2	2	2	5	5	5	5	0.5	2	4	4	2										1	1	1	1	1	1	1	1				1	2
Airport Regulations - Water pollution - accepted limits - fresh water												0.0001	0.0001	0.2	0.9	0.7	0.5	2.5	2.5	4				15	0.007	0.03									6.5-9				1	10	0.2										0.05
ANZG (2018) Freshwater 95% toxicant DGVs															10		170	160	260	60							65		550								20	0.045		20	160			490							10
ANZG (2018) Freshwater 99% toxicant DGVs															3		85	120	160	40							16		230								10	0.013		3	120			340							3.6
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
288413	6246761	WSI	WSA GW06	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.3	-	-	18.7	6.96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.3	-121.1	18.7	6.96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.64	0.64	24	18.6	7.24	<0.006	-	<0.03	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
288413	6246761	WSI	WSA GW06	06-Oct-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	4.51	4.51	79.8	18.4	5.79	<0.006	-	<0.03	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
288413	6246761	WSI	WSA GW06	18-Dec-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	0.19	90.3	20.4	6.23	<0.006	-	<0.00001	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
288413	6246761	WSI	WSA GW06	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19	-	-	20.4	6.23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.39	-	-	18.8	6.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	18-Apr-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	0.39	-153.7	18.8	6.78	<0.001	-	<0.005	-	<1	-	<0.5	<0.5	<0.5	<0.5	<1	<5	<100	<5	<1	-
288413	6246761	WSI	WSA GW06	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.42	-	-	17	6.86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.42	-103.8	17	6.86	<0.0002	-	<0.001	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<1	<100	<0.1	<0.2	<2
288413	6246761	WSI	WSA GW06	06-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	0.66	-10.1	18.6	6.91	<0.0001	-	<0.00005	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.5	<10	<0.5	<0.1	<1
288413	6246761	WSI	WSA GW06	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.66	-	-	18.6	6.91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	12-Dec-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	<0.006	-	<0.03	<10	<10	<3	<3	<3	<3	<3	<10	<30	<100	<30	<10	<10
288413	6246761	WSI	WSA GW06	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.91	-	-	19.3	6.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	<0.0005	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.5	<10	<0.5	<0.1	<1
288413	6246761	WSI	WSA GW06	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.24	-	-	19.1	6.88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-	-	21.3	6.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	29-Mar-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	0.9	-210	21.3	6.4	<0.006	-	<0.001	-	<10	-	<1	<3	<3	<3	<5	<5	<100	<1	<10	-
288413	6246761	WSI	WSA GW07	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.37	6.37	-98	18.7	7.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.81	3.81	26.3	17.7	6.03	<0.006	-	<0.03	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
288413	6246761	WSI	WSA GW07	18-Dec-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	0.47	99.6	20.92	6.56	<0.006	-	<0.00001	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
288413	6246761	WSI	WSA GW07	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47	-	-	20.92	6.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.56	-	-	18.5	6.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.56	-70.3	18.5	6.59	<0.001	-	<0.005	-	<1	-	<0.5	<0.5	<0.5	<0.5	<1	<5	<100	<5	<1	-
288413	6246761	WSI	WSA GW07	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.46	-	-	16.5	6.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Jul-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	0.46	-51.2	16.5	6.59	<0.0002	-	<0.001	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<1	<100	<0.1	<0.2	<2
288413	6246761	WSI	WSA GW07	06-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	1.41	28.1	18.9	6.65	<0.0001	-	<0.00005	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.5	<10	<0.5	<0.1	<1
288413	6246761	WSI	WSA GW07	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.41	-	-	18.9	6.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	13-Dec-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.34	-	-	20.4	6.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Apr-19	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	<0.0005	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.5	<10	<0.5	<0.1	<1
288413	6246761	WSI	WSA GW07	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.86	-	-	19.6	6.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	-	-	20.6	6.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	29-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	-229	20.6	6.11	-	-	<0.00001	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.33	0.33	-136	18.2	7.39	<0.006	-	<0.03	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
288574	6246161	WSI	WSA GW04	06-Oct-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	4.53	4.53	-26	18.6	5.49	-	-	<0.00005	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Dec-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	-0.01	-10.5	21.36	5.66	<0.006	-	<0.00001	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
288574	6246161	WSI	WSA GW04	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.01	-	-	21.36	5.66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.61	-	-	20	6.34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.61	-127.2	20	6.34	<0.001	-	<0.005	-	<1	-	<0.5	<0.5	<0.5	<0.5	<1	<5	<100	<5	<1	-
288574	6246161	WSI	WSA GW04	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.62	-	-	18.1	6.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Jul-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	0.62	-127	18.1	6.43	<0.0002	-	<0.001	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<1	<100	<0.1	<0.2	<2
288574	6246161	WSI	WSA GW04	06-Sep-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	6.4	-65.5	18.6	6.93	<0.0001	-	<0.0005	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.5	<10	<0.5	<0.1	<1
288574	6246161	WSI	WSA GW04	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.4	-	-	18.6	6.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	12-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-	19.7	6.67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-	19.9	6.67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288838	6247416	WSI	SMGW-BH-C206	08-Sep-20	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<4	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	<2	<4
288852	6246085	WSI	SMGW-BH-C002	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288852	6246085	WSI	SMGW-BH-C002	06-Sep-19	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<0.5	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	<1	<2
288878	6246774	WSI	SMGW-BH-C208	17-May-21	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<4	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	<2	<4
288970	6246102	WSI	SMGW-BH-C001S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288970	6246102	WSI	SMGW-BH-C001S	06-Sep-19	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	-	-	-	-	<5	<5	<5	<5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	1.1	<1	-	-	-	<1	<2
289013	6246245	WSI	WSA GW08	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	20.2	6.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	29-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-297.6	20.2	6.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	15-Jun-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	1.04	1.04	-305	18	7.77	<0.006	-	<0.00001	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
289013	6246245	WSI	WSA GW08	05-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.33	-312	19.1	6.42	-	-	<0.00005	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.33	-	-	19.1	6.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Dec-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	0.11	-328.8	21.46	6.97	<0.006	-	<0.00001	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
289013	6246245	WSI	WSA GW08	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.11	-	-	21.46	6.97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.42	-	-	19.5	6.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.42	-337.1	19.5	6.84	<0.001	-	<0.005	-	<1	-	<0.5	<0.5	<0.5	<0.5	<1	<5	<100	<5	<1	-
289013	6246245	WSI	WSA GW08	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	19.5	6.86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Jul-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	0.5	-331.1	19.5	6.86	<0.0002	-	<0.001	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<1	<100	<0.1	<0.2	<2
289013	6246245	WSI	WSA GW08	06-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.42	-281.3	18	6.91	<0.0001	-	<0.0005	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.5	<10	<0.5	<0.1	<1
289013	6246245	WSI	WSA GW08	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.42	-	-	18	6.91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	13-Dec-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	<0.006	-	<0.03	<10	<10	<3	<3	<3	<3	<3	<10	<30	<100	<30	<10	<10

							Halogenated Hydrocarbons					Halogenated Benzenes															Explosives			Field						Phenols															
					Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	Pentachlorobenzene	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene	TDS (Field)	DO (Field)	DO (Field) (Filtered)	Redox Potential (Field)	Temp (Field)	pH (Field)	3/4-Methylphenol (m/p-cresol)	2,3,4,6-Tetrachlorophenol	2,4-Dinitrophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mV	oC	-	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					50		5	50	50	5	50				5		2	2	2	2	5	5	5	5	0.5	2	4	4	2										1	1	1	1	1	1	1	1				1	2
Airport Regulations - Water pollution - accepted limits - fresh water												0.0001	0.0001	0.2	0.9	0.7	0.5	2.5	2.5	4				15	0.007	0.03									6.5-9				1	10	0.2										0.05
ANZG (2018) Freshwater 95% toxicant DGVs															10		170	160	260	60							65		550								20	0.045		20	160			490							10
ANZG (2018) Freshwater 99% toxicant DGVs															3		85	120	160	40							16		230								10	0.013		3	120			340							3.6
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
289013	6246245	WSI	WSA GW08	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.18	-	-	20.2	6.85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	<0.0001	-	<0.0005	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.5	<10	<0.5	<0.1	<1
289013	6246245	WSI	WSA GW08	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	-	-	20.2	6.79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	07-Oct-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	02-Dec-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289220	6247060	WSI	SMGW-BH-C331	29-Apr-21	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289414	6246914	WSI	SMGW-BH-C325	29-Apr-21	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	3500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289595	6246615	WSI	SMGW-BH-C322	13-May-21	<0.05	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	-	-	-	-	-	12,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289595	6246615	WSI	SMGW-BH-C322	13-May-21	<0.2	-	<0.1	<2	<2	-	<2	-	-	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	19,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289595	6246615	WSI	SMGW-BH-C322	13-May-21	<5	-	<5	<5	<5	<5	<5	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	-	-	-	-	-	7500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	18-Feb-21	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	19,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	17-Feb-21	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	14,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289629	6246535	WSI	SMGW-BH-C320	29-Apr-21	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	14,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	3400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<10	-	<1	<10	<10	-	<10	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	3700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	3200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	13-May-21	<0.05	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	-	-	-	-	-	3200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	15-Feb-21	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	15,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290274	6248345	WSI	SMGW-BH-C201S	27-Aug-20	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<4	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	<2	<4
290279	6248348	WSI	SMGW-BH-C201	03-Sep-20	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<4	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	<2	<4
290304	6247361	WSI	SMGW-BH-C351	21-Apr-21	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	28-Mar-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	0.16	0.16	-271.7	19.8	6.74	-	-	<0.00001	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.79	-147	18.8	7.69	<0.006	-	<0.03	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
290461	6247764	WSI	WSA GW16	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.79	-	-	18.8	7.69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Oct-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	2.21	-151.3	19.6	6.68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.21	-	-	19.6	6.68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	17-Apr-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	0.63	0.63	41.2	20.1	6.69	<0.001	-	<0.005	-	<1	-	<0.5	<0.5	<0.5	<0.5	<1	<5	<100	<5	<1	-
290461	6247764	WSI	WSA GW16	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.39	-	-	18	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.39	-106.5	18	6.7	<0.006	-	<0.03	<10	<10	<3	<3	<3	<3	<3	<10	<30	<100	<30	<10	<10
290461	6247764	WSI	WSA GW16	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.0001	-	<0.0001	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.5	<10	<0.5	<0.1	<1
290461	6247764	WSI	WSA GW16	12-Dec-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	<0.0005	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.5	<10	<0.5	<0.1	<1
290461	6247764	WSI	WSA GW16	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.37	-	-	20.1	6.64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290513	6244560	Southern Tunnels	SMGW-BH-D206	17-May-21	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<4	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	<2	<4
290677	6244060	Aerotropolis	SMGW-BH-D322	15-Mar-21	<0.05	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290695	6243992	Aerotropolis	SMGW-BH-D324	22-Feb-21	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.2	-	-	-	-	12,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290695	6243992	Aerotropolis	SMGW-BH-D324	15-Mar-21	<0.05	<0.01	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290704	6243892	Aerotropolis	SMGW-BH-D326	18-Feb-21	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.2	-	-	-	-	7600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290704	6243892	Aerotropolis	SMGW-BH-D326	16-Mar-21	<0.05	<0.01	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243914	Aerotropolis	SMGW-BH-D308	18-Feb-21	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.2	-	-	-	-	5500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	11-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	01-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	23-Feb-21	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<4	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	<2	<4
290716	6244026	Aerotropolis	SMGW-BH-D207	01-Sep-20	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<4	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	<2	<4
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

							Halogenated Hydrocarbons						Halogenated Benzenes															Explosives			Field						Phenols															
					Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	Pentachlorobenzene	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene	TDS (Field)	DO (Field)	DO (Field) (Filtered)	Redox Potential (Field)	Temp (Field)	pH (Field)	3/4-Methylphenol (m/p-cresol)	2,3,4,6-Tetrachlorophenol	2,4-Dinitrophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mV	oC	-	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					50		5	50	50	5	50				5		2	2	2	2	5	5	5	5	0.5	2	4	4	2										1	1	1	1	1	1	1	1				1	2
Airport Regulations - Water pollution - accepted limits - fresh water												0.0001	0.0001	0.2	0.9	0.7	0.5	2.5	2.5	4				15	0.007	0.03									6.5-9				1	10	0.2										0.05
ANZG (2018) Freshwater 95% toxicant DGVs															10		170	160	260	60							65		550								20	0.045		20	160			490							10
ANZG (2018) Freshwater 99% toxicant DGVs															3		85	120	160	40							16		230								10	0.013		3	120			340							3.6
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290720	6243765	Aerotropolis	SMGW-BH-D329	18-Feb-21	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.2	-	-	-	-	12,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290720	6243765	Aerotropolis	SMGW-BH-D329	16-Mar-21	<0.05	<0.01	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290742	6243691	Aerotropolis	SMGW-BH-D208	17-May-21	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<4	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	<2	<4
290762	6248715	WSI	SMGW-BH-C305	20-Apr-21	<0.05	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	-	-	-	-	-	19,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290762	6248715	WSI	SMGW-BH-C305	12-May-21	<0.05	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	-	-	-	-	-	17,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290945	6248669	WSI	SMGW-BH-C304	20-Apr-21	<0.05	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	-	-	-	-	-	9800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290964	6253779	Luddenham Road	SMGW-BH-B120	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290964	6253779	Luddenham Road	SMGW-BH-B120	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291041	6254012	Luddenham Road	SMGW-BH-B320	15-Apr-21	<1	-	<1	<1	<1	<1	<1	<0.005	<0.005	-	<5	-	-	<1	<1	<1	-	<1	<1	<1	<0.1	<2	<20	<4	<5	-	-	-	-	-	-	-	-	<0.03	-	<10	-	<3	<3	<3	<3	<10	<30	-	<30	<10	<10
291173	6254264	Luddenham Road	SMGW-BH-B319	02-Mar-21	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<4	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	<2	<4
291173	6254264	Luddenham Road	SMGW-BH-B319	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.88	0.88	-142.5	19.5	6.84	-	-	<0.00001	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	86	19.1	6.57	<0.006	-	<0.00005	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
291265	6247780	WSI	WSA GW23	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	-	-	19.1	6.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Dec-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	0.2	0.2	17.7	22.9	6.69	<0.006	-	<0.00001	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
291265	6247780	WSI	WSA GW23	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.26	-	-	20.2	6.64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.26	-5.4	20.2	6.64	<0.001	-	<0.005	-	<1	-	<0.5	<0.5	<0.5	<0.5	<1	<5	<100	<5	<1	-
291265	6247780	WSI	WSA GW23	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.27	0.27	23	19.7	6.66	<0.0002	-	<0.001	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<1	<100	<0.1	<0.2	<2
291265	6247780	WSI	WSA GW23	05-Sep-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	1.33	58.8	18.7	6.7	<0.0001	-	<0.0005	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.5	<10	<0.5	<0.1	<1
291265	6247780	WSI	WSA GW23	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.33	-	-	18.7	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	13-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	<0.006	-	<0.0001	<10	<10	<3	<3	<3	<3	<3	<10	<30	<100	<30	<10	<10
291265	6247780	WSI	WSA GW23	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.31	-	-	19.2	6.72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Apr-19	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	20	6.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	19,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	<0.05	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	-	-	-	-	-	18,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<0.05	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	-	-	-	-	-	10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<0.2	-	<0.1	<2	<2	-	<2	-	-	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	18,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<0.05	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	-	-	-	-	-	8100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<2	-	<2	<2	<2	<2	<2	-	-	-	-	-	-	<2	<2	<2	-	<2	<2	<2	-	-	-	-	-	6400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<10	-	<1	<10	<10	-	<10	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<0.001	-	-	-	-	6800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<2	-	<2	<2	<2	<2	<2	-	-	-	-	-	-	<2	<2	<2	-	<2	<2	<2	-	-	-	-	-	6400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291351	6247890	WSI	SMGW-BH-C343	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291370	6249349	WSI	SMGW-BH-C301	15-Apr-21	<0.05	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	-	-	-	-	-	10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291504	6255514	Luddenham Road	SMGW-BH-B313	10-May-21	<0.05	-	<1	<1	<1	<1	<1	<0.005	<0.005	-	<5	-	-	<1	<1	<0.01	-	<1	<1	<0.01	-	<5	<5	<5	<50	22,000	-	-	-	-	-	-	-	<0.03	-	<10	-	<3	<3	<3	<3	<10	<30	-	<30	<10	<10
291542	6248270	WSI	SMGW-BH-C340	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291562	6255942	Luddenham Road	SMGW-BH-B312	12-Feb-21	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.1	-	-	-	-	13,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291562	6255942	Luddenham Road	SMGW-BH-B312	16-Mar-21	<0.05	<0.01	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<0.5	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	<1	<2
291703	6256950	Luddenham Road	SMGW-BH-B106	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	31-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.1	-	-	-	-	16,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<10	-	<1	<10	<10	-	<10	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<0.2	-	-	-	-	17,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.1	-	-	-	-	16,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<0.5	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	<1	<2
291737	6259192	Orchard Hills	SMGW-BH-A310	21-Apr-21	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.2	-	-	-	-	18,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

							Halogenated Hydrocarbons					Halogenated Benzenes															Explosives			Field						Phenols															
					Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	Pentachlorobenzene	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene	TDS (Field)	DO (Field)	DO (Field) (Filtered)	Redox Potential (Field)	Temp (Field)	pH (Field)	3/4-Methylphenol (m/p-cresol)	2,3,4,6-Tetrachlorophenol	2,4-Dinitrophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mV	oC	-	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					50		5	50	50	5	50				5		2	2	2	2	5	5	5	5	0.5	2	4	4	2										1	1	1	1	1	1	1	1				1	2
Airport Regulations - Water pollution - accepted limits - fresh water												0.0001	0.0001	0.2	0.9	0.7	0.5	2.5	2.5	4				15	0.007	0.03									6.5-9				1	10	0.2										0.05
ANZG (2018) Freshwater 95% toxicant DGVs															10		170	160	260	60							65		550								20	0.045		20	160			490							10
ANZG (2018) Freshwater 99% toxicant DGVs															3		85	120	160	40							16		230								10	0.013		3	120			340							3.6
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
291737	6259191	Orchard Hills	SMGW-BH-A310S	26-Apr-21	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.1	-	-	-	-	19,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19	0.19	-86	20.1	6.46	<0.006	-	<0.001	-	<10	-	<1	<3	<3	<3	<5	<5	<100	<1	<10	-
291738	6248976	WSI	WSA GW19	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.16	-68.7	18.7	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.16	-	-	18.7	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	04-Oct-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	1.5	148	20.2	6.11	-	-	<0.00005	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	-	20.2	6.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.28	-	-	20	6.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	19-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.28	71.2	20	6.3	<0.001	-	<0.005	-	<1	-	<0.5	<0.5	<0.5	<0.5	<1	<5	<100	<5	<1	-
291738	6248976	WSI	WSA GW19	03-Jul-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	0.44	0.44	107.5	17.2	6.22	<0.0002	-	<0.001	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<1	<100	<0.1	<0.2	<2
291738	6248976	WSI	WSA GW19	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	2.07	2.07	61.5	18.7	6.42	<0.0001	-	<0.0001	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.5	<10	<0.5	<0.1	<1
291738	6248976	WSI	WSA GW19	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	0.48	-	-	20.7	6.12	-	-	<0.00001	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6259051	Orchard Hills	SMGW-BH-A311	11-May-21	<0.05	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	-	-	-	-	-	14,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	28-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-May-20	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<4	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	<2	<4
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291836	6257203	Luddenham Road	SMGW-BH-B309	02-Mar-21	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291848	6248251	WSI	SMGW-BH-C341	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291953	6260516	Northern Tunnels	SMGW-BH-A019	06-Sep-19	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<0.5	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	<1	<2
292033	6257200	Luddenham Road	SMGW-BH-B308	02-Mar-21	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	<0.05	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	<1	<1	<1	<1	<1	<1	<1	<0.005	<0.005	<5	<5	<5	<5	<1	<1	<1	-	<1	<1	<1	<5	<5	<5	<5	<5	9400	-	-	-	-	-	-	<2	<0.03	<10	<10	<3	<3	<3	<3	<3	<10	<30	-	<30	<10	<10
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	<0.05	<0.01	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<0.01	-	<1	<1	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	28-Mar-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	1.83	1.83	-3	18.7	7.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.1	63.5	18	7.28	<0.006	-	<0.00001	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
292130	6249000	WSI	WSA GW20	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.1	-	-	18	7.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.69	193.4	17.8	6.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.69	-	-	17.8	6.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	19-Dec-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	0.26	0.26	89.1	18.43	7.04	<0.006	-	<0.00001	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
292130	6249000	WSI	WSA GW20	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.15	-	-	19.2	7.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	18-Apr-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	1.15	-76.8	19.2	7.02	<0.001	-	<0.005	-	<1	-	<0.5	<0.5	<0.5	<0.5	<1	<5	<100	<5	<1	-

							Halogenated Hydrocarbons					Halogenated Benzenes															Explosives			Field						Phenols															
					Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	Pentachlorobenzene	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene	TDS (Field)	DO (Field)	DO (Field) (Filtered)	Redox Potential (Field)	Temp (Field)	pH (Field)	3/4-Methylphenol (m/p-cresol)	2,3,4,6-Tetrachlorophenol	2,4-Dinitrophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mV	oC	-	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					50		5	50	50	5	50				5		2	2	2	2	5	5	5	5	0.5	2	4	4	2										1	1	1	1	1	1	1	1				1	2
Airport Regulations - Water pollution - accepted limits - fresh water												0.0001	0.0001	0.2	0.9	0.7	0.5	2.5	2.5	4				15	0.007	0.03									6.5-9				1	10	0.2										0.05
ANZG (2018) Freshwater 95% toxicant DGVs															10		170	160	260	60							65		550								20	0.045		20	160			490							10
ANZG (2018) Freshwater 99% toxicant DGVs															3		85	120	160	40							16		230								10	0.013		3	120			340							3.6
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	**y_coord**	**Monitoring_Zone**	**Location_Code**	**Sampled_Date**																																															
292130	6249000	WSI	WSA GW20	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.41	0.41	48.3	17.1	6.93	<0.0002	-	<0.001	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<1	<100	<0.1	<0.2	<2
292130	6249000	WSI	WSA GW20	05-Sep-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	0.45	32.3	17.7	6.93	<0.0001	-	<0.0005	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.5	<10	<0.5	<0.1	<1
292130	6249000	WSI	WSA GW20	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.45	-	-	17.7	6.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.34	-	-	18.1	6.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	18.2	6.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	0.06	26	18	6.28	<0.006	-	<0.00001	-	<10	-	<1	<3	<3	<3	<5	<5	<100	<1	<10	-
292130	6249000	WSI	WSA GW21	14-Jun-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	5.37	45	18.5	6.79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.37	-	-	18.5	6.79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.32	20.1	17.6	6.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.32	-	-	17.6	6.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	19-Dec-17	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<2	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	0.11	0.11	-12.4	20.12	6.42	<0.006	-	<0.00001	-	<10	-	<3	<3	<3	<3	<10	<30	<100	<30	<10	-
292130	6249000	WSI	WSA GW21	21-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.78	-	-	18	6.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.78	-84.6	18	6.52	<0.001	-	<0.005	-	<1	-	<0.5	<0.5	<0.5	<0.5	<1	<5	<100	<5	<1	-
292130	6249000	WSI	WSA GW21	03-Jul-18	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	0.2	0.2	2.5	16.8	6.51	<0.0002	-	<0.001	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<1	<100	<0.1	<0.2	<2
292130	6249000	WSI	WSA GW21	05-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	21.9	17.1	6.47	<0.0001	-	<0.0005	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.5	<10	<0.5	<0.1	<1
292130	6249000	WSI	WSA GW21	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	-	-	17.1	6.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	17.8	6.58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Apr-19	<1	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	17.5	6.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	06-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	05-Sep-19	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<0.5	<2	<4	<4	<2	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	<1	<2
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Dec-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Feb-21	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	06-Mar-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	05-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	24-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Mar-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

							Halogenated Hydrocarbons					Halogenated Benzenes														
					Vinyl chloride	trichloroethane (1,1,1 & 1,1,2)	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,3,5-Trichlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	Pentachlorobenzene
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					50		5	50	50	5	50				5		2	2	2	2	5	5	5	5	0.5	2
Airport Regulations - Water pollution - accepted limits - fresh water												0.0001	0.0001	0.2	0.9	0.7	0.5	2.5	2.5	4				15	0.007	0.03
ANZG (2018) Freshwater 95% toxicant DGVs															10		170	160	260	60						
ANZG (2018) Freshwater 99% toxicant DGVs															3		85	120	160	40						
PFAS NEMP 2018 Table 5 Freshwater 99%																										
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																						
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	<50	-	<5	<50	<50	<5	<50	-	-	-	<5	-	<2	<2	<2	<2	<5	<5	<5	<5	<0.5	<2
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.1	-
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1	<1	<1	-	<1	<1	<1	<0.2	-
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

					Explosives			Field						Phenols															
					2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene	TDS (Field)	DO (Field)	DO (Field) (Filtered)	Redox Potential (Field)	Temp (Field)	pH (Field)	3/4-Methylphenol (m/p-cresol)	2,3,4,6-Tetrachlorophenol	2,4-Dinitrophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol
					µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mV	oC	-	mg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					4	4	2										1	1	1	1	1	1	1	1				1	2
Airport Regulations - Water pollution - accepted limits - fresh water													6.5-9				1	10	0.2										0.05
ANZG (2018) Freshwater 95% toxicant DGVs					65		550								20	0.045		20	160			490							10
ANZG (2018) Freshwater 99% toxicant DGVs					16		230								10	0.013		3	120			340							3.6
PFAS NEMP 2018 Table 5 Freshwater 99%																													
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																									
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	<4	<4	<2	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	<1	<2
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	-	-	-	12,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	-	-	-	10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

									Herbicides				Nitroaromatics			Organochlorine Pesticides																																			
					Phenol	Tetrachlorophenols	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	2,4,5-Trichlorophenoxy-propanoic acid	Dinoseb	Pronamide	Trifluralin	2-Picoline	4-aminobiphenyl	Pentachloronitrobenzene	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endrin aldehyde	Endrin ketone	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos
					µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					1						2		2	2	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2		0.5		0.5	0.5	0.5	0.5	0.0005				0.5	0.5
Airport Regulations - Water pollution - accepted limits - fresh water					50													0.01			0.004					0.001		0.002						0.003	0.003	0.01		0.04	0.000008	0.01					0.001						
ANZG (2018) Freshwater 95% toxicant DGVs					320							0.0044									0.08					0.01								0.02	0.2	0.09			0.0002	0.02					0.01					0.01	
ANZG (2018) Freshwater 99% toxicant DGVs					85							0.0026									0.03					0.006								0.01	0.07	0.01			0.0001	0.01					0.00004					0.00003	
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
288413	6246761	WSI	WSA GW06	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	15-Jun-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	06-Oct-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	18-Dec-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	<0.01	-	<0.01	<0.01	-	<0.1	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	<0.5	<0.5	-	-	<0.5	-	<0.0005	<0.5	<0.5	<0.5	-	<0.5
288413	6246761	WSI	WSA GW06	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	18-Apr-18	<0.5	<1	<0.002	<0.1	<0.001	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Jul-18	<0.1	<0.2	<0.002	<0.1	<0.0002	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	06-Sep-18	<0.05	<0.5	<0.001	<0.01	<0.0001	<10	-	-	-	-	-	<0.05	<0.05	<0.05	<0.1	<0.05	<0.5	<0.5	-	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.0005	<0.2	<0.2	-	-	<2	<0.2	<0.002	<20	<0.2	<20	<0.2	<0.2
288413	6246761	WSI	WSA GW06	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	12-Dec-18	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Apr-19	<0.05	<0.5	<0.001	<0.01	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	29-Mar-17	<3	<30	<0.01	<0.1	<0.001	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	15-Jun-17	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	06-Oct-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Dec-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	<0.01	-	<0.01	<0.01	-	<0.1	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	<0.5	<0.5	-	-	<0.5	-	<0.0005	<0.5	<0.5	<0.5	-	<0.5
288413	6246761	WSI	WSA GW07	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Apr-18	<0.5	<1	<0.002	<0.1	<0.001	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Jul-18	<0.1	<0.2	<0.002	<0.1	<0.0002	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	06-Sep-18	<0.05	<0.5	<0.001	<0.01	<0.0001	<10	-	-	-	-	-	<0.05	<0.05	<0.05	<0.1	<0.05	<0.5	<0.5	-	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.0005	<0.2	<0.2	-	-	<2	<0.2	<0.002	<20	<0.2	<20	<0.2	<0.2
288413	6246761	WSI	WSA GW07	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	13-Dec-18	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
288413	6246761	WSI	WSA GW07	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Apr-19	<0.05	<0.5	<0.001	<0.01	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	29-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	<0.01	-	<0.1	-	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	<0.1	<0.1	-	-	<0.1	-	<0.0001	<0.1	<0.1	<0.1	-	<0.1
288574	6246161	WSI	WSA GW04	15-Jun-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	<0.1	<0.05	-	<0.5	-	<0.05	<0.05	<0.05	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	-	-	<0.5	<0.5	-	-	<0.5	-	<0.0005	<0.5	<0.5	<0.5	-	<0.5
288574	6246161	WSI	WSA GW04	18-Dec-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	<0.01	-	<0.01	<0.01	-	<0.1	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	<0.5	<0.5	-	-	<0.5	-	<0.0005	<0.5	<0.5	<0.5	-	<0.5
288574	6246161	WSI	WSA GW04	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Apr-18	<0.5	<1	<0.002	<0.1	<0.001	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Jul-18	<0.1	<0.2	<0.002	<0.1	<0.0002	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	06-Sep-18	<0.05	<0.5	<0.001	<0.01	<0.0001	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	12-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288838	6247416	WSI	SMGW-BH-C206	08-Sep-20	<2	-	-	-	-	-	<2	-	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	<2	<2	<4	<4	<2	-	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-	-	-	<2	<2	<0.002	-	-	-	<2	<2
288852	6246085	WSI	SMGW-BH-C002	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288852	6246085	WSI	SMGW-BH-C002	06-Sep-19	<1	-	-	-	-	-	<2	-	<2	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.0005	-	-	-	<0.5	<0.5
288878	6246774	WSI	SMGW-BH-C208	17-May-21	<2	-	-	-	-	-	<2	-	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	<2	<2	<4	<4	<2	-	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-	-	-	<2	<2	<0.002	-	-	-	<2	<2
288970	6246102	WSI	SMGW-BH-C001S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288970	6246102	WSI	SMGW-BH-C001S	06-Sep-19	<1	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.0005	-	-	-	<0.5	<0.5
289013	6246245	WSI	WSA GW08	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	29-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	15-Jun-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	<0.01	-	-	<0.01	-	<0.1	-	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	<4	<4	-	-	<4	-	<0.004	<4	<4	<4	-	<4
289013	6246245	WSI	WSA GW08	05-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	<0.1	<0.05	-	<0.5	-	<0.05	<0.05	<0.05	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	-	-	<0.5	<0.5	-	-	<0.5	-	<0.0005	<0.5	<0.5	<0.5	-	<0.5
289013	6246245	WSI	WSA GW08	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Dec-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	<0.01	-	<0.01	<0.01	-	<0.1	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	<0.5	<0.5	-	-	<0.5	-	<0.0005	<0.5	<0.5	<0.5	-	<0.5
289013	6246245	WSI	WSA GW08	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Apr-18	<0.5	<1	<0.002	<0.1	<0.001	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Jul-18	<0.1	<0.2	<0.002	<0.1	<0.0002	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	06-Sep-18	<0.05	<0.5	<0.001	<0.01	<0.0001	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	13-Dec-18	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

										Herbicides			Nitroaromatics			Organochlorine Pesticides																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Phenol	Tetrachlorophenols	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	2,4,5-Trichlorophenoxy-propanoic acid	Dinoseb	Pronamide	Trifluralin	2-Picoline	4-aminobiphenyl	Pentachloronitrobenzene	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endrin aldehyde	Endrin ketone	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos
					µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					1						2		2	2	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2		0.5		0.5	0.5	0.5	0.5	0.0005				0.5	0.5
Airport Regulations - Water pollution - accepted limits - fresh water					50													0.01			0.004					0.001		0.002						0.003	0.003	0.01		0.04	0.000008	0.01					0.001						
ANZG (2018) Freshwater 95% toxicant DGVs					320							0.0044									0.08					0.01								0.02	0.2	0.09			0.0002	0.02					0.01					0.01	
ANZG (2018) Freshwater 99% toxicant DGVs					85							0.0026									0.03					0.006								0.01	0.07	0.01			0.0001	0.01					0.00004					0.00003	
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
289013	6246245	WSI	WSA GW08	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	<0.05	<0.5	<0.001	<0.01	-	<10	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0000	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
289013	6246245	WSI	WSA GW08	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	07-Oct-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	02-Dec-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289220	6247060	WSI	SMGW-BH-C331	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	-	<0.2	<0.2	<2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
289414	6246914	WSI	SMGW-BH-C325	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289595	6246615	WSI	SMGW-BH-C322	13-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289595	6246615	WSI	SMGW-BH-C322	13-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289595	6246615	WSI	SMGW-BH-C322	13-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	18-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289629	6246535	WSI	SMGW-BH-C320	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	13-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290274	6248345	WSI	SMGW-BH-C201S	27-Aug-20	<2	-	-	-	-	-	<2	-	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	<2	<2	<4	<4	<2	-	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-	-	-	<2	<2	<0.002	-	-	-	<2	<2
290279	6248348	WSI	SMGW-BH-C201	03-Sep-20	<2	-	-	-	-	-	<2	-	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	<2	<2	<4	<4	<2	-	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-	-	-	<2	<2	<0.002	-	-	-	<2	<2
290304	6247361	WSI	SMGW-BH-C351	21-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	-	<0.2	<0.2	<2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
290390	6244794	Southern Tunnels	SMGW-BH-D205	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	<0.01	-	<0.1	-	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	<0.1	<0.1	-	-	<0.1	-	<0.0001	<0.1	<0.1	<0.1	-	<0.1
290461	6247764	WSI	WSA GW16	14-Jun-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	17-Apr-18	<0.5	<1	<0.002	<0.1	<0.001	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Jul-18	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	07-Sep-18	<0.05	<0.5	<0.001	<0.01	<0.0001	<10	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
290461	6247764	WSI	WSA GW16	12-Dec-18	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
290461	6247764	WSI	WSA GW16	03-Apr-19	<0.05	<0.5	<0.001	<0.01	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290513	6244560	Southern Tunnels	SMGW-BH-D206	17-May-21	<2	-	-	-	-	-	<2	-	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	<2	<2	<4	<4	<2	-	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-	-	-	<2	<2	<0.002	-	-	-	<2	<2
290677	6244060	Aerotropolis	SMGW-BH-D322	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	-	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
290695	6243992	Aerotropolis	SMGW-BH-D324	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
290695	6243992	Aerotropolis	SMGW-BH-D324	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
290704	6243892	Aerotropolis	SMGW-BH-D326	18-Feb-21	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
290704	6243892	Aerotropolis	SMGW-BH-D326	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
290715	6243914	Aerotropolis	SMGW-BH-D308	18-Feb-21	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	11-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	01-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	23-Feb-21	<2	-	-	-	-	-	<2	-	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	<2	<2	<4	<4	<2	-	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-	-	-	<2	<2	<0.002	-	-	-	<2	<2
290716	6244026	Aerotropolis	SMGW-BH-D207	01-Sep-20	<2	-	-	-	-	-	<2	-	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	<2	<2	<4	<4	<2	-	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-	-	-	<2	<2	<0.002	-	-	-	<2	<2
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

									Herbicides				Nitroaromatics			Organochlorine Pesticides																																			
					Phenol	Tetrachlorophenols	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	2,4,5-Trichlorophenoxy-propanoic acid	Dinoseb	Pronamide	Trifluralin	2-Picoline	4-aminobiphenyl	Pentachloronitrobenzene	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endrin aldehyde	Endrin ketone	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos
					µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					1						2		2	2	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2		0.5		0.5	0.5	0.5	0.5	0.0005				0.5	0.5
Airport Regulations - Water pollution - accepted limits - fresh water					50													0.01			0.004					0.001		0.002						0.003	0.003	0.01		0.04	0.000008	0.01					0.001						
ANZG (2018) Freshwater 95% toxicant DGVs					320							0.0044									0.08					0.01								0.02	0.2	0.09			0.0002	0.02					0.01					0.01	
ANZG (2018) Freshwater 99% toxicant DGVs					85							0.0026									0.03					0.006								0.01	0.07	0.01			0.0001	0.01					0.00004					0.00003	
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290720	6243765	Aerotropolis	SMGW-BH-D329	18-Feb-21	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
290720	6243765	Aerotropolis	SMGW-BH-D329	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
290742	6243691	Aerotropolis	SMGW-BH-D208	17-May-21	<2	-	-	-	-	-	<2	-	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	<2	<2	<4	<4	<2	-	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-	-	-	<2	<2	<0.002	-	-	-	<2	<2
290762	6248715	WSI	SMGW-BH-C305	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	-	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
290762	6248715	WSI	SMGW-BH-C305	12-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290945	6248669	WSI	SMGW-BH-C304	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	-	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
290964	6253779	Luddenham Road	SMGW-BH-B120	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290964	6253779	Luddenham Road	SMGW-BH-B120	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291041	6254012	Luddenham Road	SMGW-BH-B320	15-Apr-21	<3	-	-	-	-	-	<5	<0.005	<5	<2	<2	<0.1	<0.1	-	<0.2	<0.1	<2	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	-	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
291173	6254264	Luddenham Road	SMGW-BH-B319	02-Mar-21	<2	-	-	-	-	-	<2	-	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	<2	<2	<4	<4	<2	-	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-	-	-	<2	<2	<0.002	-	-	-	<2	<2
291173	6254264	Luddenham Road	SMGW-BH-B319	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	<0.01	-	<0.1	-	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	<0.1	<0.1	-	-	<0.1	-	<0.0001	<0.1	<0.1	<0.1	-	<0.1
291265	6247780	WSI	WSA GW23	04-Oct-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	<0.05	-	<0.1	<0.05	-	<0.5	-	<0.05	<0.05	<0.05	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	-	-	<0.5	<0.5	-	-	<0.5	-	<0.0005	<0.5	<0.5	<0.5	-	<0.5
291265	6247780	WSI	WSA GW23	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Dec-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	<0.01	-	<0.01	<0.01	-	<0.1	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	<0.5	<0.5	-	-	<0.5	-	<0.0005	<0.5	<0.5	<0.5	-	<0.5
291265	6247780	WSI	WSA GW23	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Apr-18	<0.5	<1	<0.002	<0.1	<0.001	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Jul-18	<0.1	<0.2	<0.002	<0.1	<0.0002	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	05-Sep-18	<0.05	<0.5	<0.001	<0.01	<0.0001	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	13-Dec-18	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
291265	6247780	WSI	WSA GW23	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.02	-	<0.2	-	-	-	<0.0002	-	-	-	<0.01	<0.2
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	-	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
291326	6249157	WSI	SMGW-BH-C302	12-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	12-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	12-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	-	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.02	-	<0.2	-	-	-	<0.0002	-	-	-	<0.01	<0.2
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	-	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
291351	6247890	WSI	SMGW-BH-C343	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	-	<0.2	<0.2	<2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
291370	6249349	WSI	SMGW-BH-C301	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	-	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291504	6255514	Luddenham Road	SMGW-BH-B313	10-May-21	<3	-	-	-	-	-	<5	<0.005	<5	<5	<5	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	-	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
291542	6248270	WSI	SMGW-BH-C340	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	-	<0.2	<0.2	<2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
291562	6255942	Luddenham Road	SMGW-BH-B312	12-Feb-21	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<2	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
291562	6255942	Luddenham Road	SMGW-BH-B312	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
291572	6256049	Luddenham Road	SMGW-BH-B109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	<1	-	-	-	-	-	<2	-	<2	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.0005	-	-	-	<0.5	<0.5
291703	6256950	Luddenham Road	SMGW-BH-B106	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	31-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	<0.2	<0.1	<2	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	-	-	<0.2	<0.0002	-	-	-	<0.2	<0.2
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	<0.2	<0.1	<2	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	<1	-	-	-	-	-	<2	-	<2	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.0005	-	-	-	<0.5	<0.5
291737	6259192	Orchard Hills	SMGW-BH-A310	21-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	-	<0.2	<0.2	<2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2

										Herbicides				Nitroaromatics			Organochlorine Pesticides																																			
					Phenol	Tetrachlorophenols	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	2,4,5-Trichlorophenoxy-propanoic acid	Dinoseb	Pronamide	Trifluralin	2-Picoline	4-aminobiphenyl	Pentachloronitrobenzene	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endrin aldehyde	Endrin ketone	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos
					µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					1						2		2	2	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2		0.5		0.5	0.5	0.5	0.5	0.0005				0.5	0.5
Airport Regulations - Water pollution - accepted limits - fresh water					50													0.01			0.004					0.001		0.002						0.003	0.003	0.01		0.04	0.000008	0.01					0.001						
ANZG (2018) Freshwater 95% toxicant DGVs					320							0.0044									0.08					0.01								0.02	0.2	0.09			0.0002	0.02					0.01					0.01	
ANZG (2018) Freshwater 99% toxicant DGVs					85							0.0026									0.03					0.006								0.01	0.07	0.01			0.0001	0.01					0.00004					0.00003	
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
291737	6259191	Orchard Hills	SMGW-BH-A310S	26-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	<0.2	<0.1	<2	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
291738	6248976	WSI	WSA GW19	28-Mar-17	<3	<30	<0.01	<0.1	<0.001	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	14-Jun-17	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	<0.1	<0.05	-	<0.5	-	<0.05	<0.05	<0.05	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	-	-	<0.5	<0.5	-	-	<0.5	-	<0.0005	<0.5	<0.5	<0.5	-	<0.5
291738	6248976	WSI	WSA GW19	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	19-Apr-18	<0.5	<1	<0.002	<0.1	<0.001	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	03-Jul-18	<0.1	<0.2	<0.002	<0.1	<0.0002	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	07-Sep-18	<0.05	<0.5	<0.001	<0.01	<0.0001	<10	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
291738	6248976	WSI	WSA GW19	14-Dec-18	-	-	-	<0.001	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0000	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
291738	6259051	Orchard Hills	SMGW-BH-A311	11-May-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	-	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
291769	6260026	Northern Tunnels	SMGW-BH-A123	28-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-May-20	<2	-	-	-	-	-	<2	-	<2	<2	<2	<2	<2	<2	<4	<2	-	-	-	<2	<2	<4	<4	<2	-	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-	-	-	<2	<2	<0.002	-	-	-	<2	<2
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291836	6257203	Luddenham Road	SMGW-BH-B309	02-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291848	6248251	WSI	SMGW-BH-C341	20-Apr-21	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	-	<0.2	<0.2	<2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.001	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
291855	6258838	Orchard Hills	SMGW-BH-A117	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291953	6260516	Northern Tunnels	SMGW-BH-A019	06-Sep-19	<1	-	-	-	-	-	<2	-	<2	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.0005	-	-	-	<0.5	<0.5
292033	6257200	Luddenham Road	SMGW-BH-B308	02-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	-	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	<3	-	-	-	-	-	<5	<0.005	<5	<5	<5	<5	<5	<5	-	<5	<5	-	-	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
292038	6261300	Claremont Meadow	SMGW-BH-A109	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Jun-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	<0.01	-	-	<0.01	-	<0.1	-	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	<4	<4	-	-	<4	-	<0.004	<4	<4	<4	-	<4
292130	6249000	WSI	WSA GW20	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	19-Dec-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	<0.01	-	<0.01	<0.01	-	<0.1	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	<0.5	<0.5	-	-	<0.5	-	<0.0005	<0.5	<0.5	<0.5	-	<0.5
292130	6249000	WSI	WSA GW20	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	18-Apr-18	<0.5	<1	<0.002	<0.1	<0.001	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date					Herbicides				Nitroaromatics			Organochlorine Pesticides																																			
					Phenol	Tetrachlorophenols	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	2,4,5-Trichlorophenoxy-propanoic acid	Dinoseb	Pronamide	Trifluralin	2-Picoline	4-aminobiphenyl	Pentachloronitrobenzene	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endrin aldehyde	Endrin ketone	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos
					µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					1						2		2	2	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2		0.5		0.5	0.5	0.5	0.5	0.0005				0.5	0.5
Airport Regulations - Water pollution - accepted limits - fresh water					50													0.01			0.004					0.001		0.002						0.003	0.003	0.01		0.04	0.000008	0.01					0.001						
ANZG (2018) Freshwater 95% toxicant DGVs					320							0.0044									0.08					0.01								0.02	0.2	0.09			0.0002	0.02					0.01					0.01	
ANZG (2018) Freshwater 99% toxicant DGVs					85							0.0026									0.03					0.006								0.01	0.07	0.01			0.0001	0.01					0.00004					0.00003	
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
292130	6249000	WSI	WSA GW20	03-Jul-18	<0.1	<0.2	<0.002	<0.1	<0.0002	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	05-Sep-18	<0.05	<0.5	<0.001	<0.01	<0.0001	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Dec-18	-	-	-	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.00001	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
292130	6249000	WSI	WSA GW20	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	28-Mar-17	<3	<30	<0.01	<0.1	<0.001	<100	-	-	-	-	-	-	<0.01	-	-	<0.01	-	<0.1	-	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	<0.1	<0.1	-	-	<0.1	-	<0.0001	<0.1	<0.1	<0.1	-	<0.1
292130	6249000	WSI	WSA GW21	14-Jun-17	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	19-Dec-17	<3	<30	<0.01	<0.1	<0.01	<100	-	-	-	-	-	-	<0.01	-	<0.01	<0.01	-	<0.1	-	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	<0.5	<0.5	-	-	<0.5	-	<0.0005	<0.5	<0.5	<0.5	-	<0.5
292130	6249000	WSI	WSA GW21	21-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	18-Apr-18	<0.5	<1	<0.002	<0.1	<0.001	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Jul-18	<0.1	<0.2	<0.002	<0.1	<0.0002	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	05-Sep-18	<0.05	<0.5	<0.001	<0.01	<0.0001	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Dec-18	-	-	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	06-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	05-Sep-19	<1	-	-	-	-	-	<2	-	<2	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.0005	-	-	-	<0.5	<0.5
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Dec-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.0001	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
293999	6261951	St Marys	SMGW-BH-A302	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	06-Mar-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	05-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	24-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Mar-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Phenol	Tetrachlorophenols	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	Herbicides: 2,4,5-Trichlorophenoxy-propanoic acid	Herbicides: Dinoseb	Herbicides: Pronamide	Herbicides: Trifluralin	Nitroaromatics: 2-Picoline	Nitroaromatics: 4-aminobiphenyl	Nitroaromatics: Pentachloronitrobenzene
					µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L
EQL					1						2		2	2	2
Airport Regulations - Water pollution - accepted limits - fresh water					50										
ANZG (2018) Freshwater 95% toxicant DGVs					320							0.0044			
ANZG (2018) Freshwater 99% toxicant DGVs					85							0.0026			
PFAS NEMP 2018 Table 5 Freshwater 99%															
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	<1	-	-	-	-	-	<2	-	<2	<2	<2
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-

Organochlorine Pesticides

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endrin aldehyde	Endrin ketone	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
EQL					0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	
Airport Regulations - Water pollution - accepted limits - fresh water							0.01			0.004					0.001		0.002						0.003	0.003	0.01		0.04	0.000008
ANZG (2018) Freshwater 95% toxicant DGVs										0.08					0.01								0.02	0.2	0.09			0.0002
ANZG (2018) Freshwater 99% toxicant DGVs										0.03					0.006								0.01	0.07	0.01			0.0001
PFAS NEMP 2018 Table 5 Freshwater 99%																												
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	-
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	<0.1	<0.1	<0.1	<0.2	<0.1	<2	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.001
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	<0.2	<0.2	<0.2	<0.2	<0.2	<2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.001
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	0.15	<0.01	<0.01	<0.01	0.22	0.06	-	-	0.06	0.01	<0.01	0.37	<0.01	<0.01	0.21	<0.01	0.23	0.16	<0.01	<0.01	<0.01	<0.01	0.15	<0.0001
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.5		0.5	0.5	0.5	0.5	0.0005				0.5	0.5
Airport Regulations - Water pollution - accepted limits - fresh water					0.01					0.001						
ANZG (2018) Freshwater 95% toxicant DGVs					0.02					0.01					0.01	
ANZG (2018) Freshwater 99% toxicant DGVs					0.01					0.00004					0.00003	
PFAS NEMP 2018 Table 5 Freshwater 99%																
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.0005	-	-	-	<0.5	<0.5
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	<2	<2	-	-	<2	<20	<0.002	<20	<2	<20	<2	<2
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	<1	<1	-	-	<1	<10	<0.001	<10	<1	<10	<1	<1
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-

					Organophosphorous Pesticides																						Other					PCBs	Pesticides								Phthalates						Solvents				
					Disulfoton	Dimethoate	Ethoprop	Ethion	Fenitrothion	Fensulfothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	Acetophenone	Butyric Acid	Carbon Monoxide	Silica (SiO2)	Tebuconazole	PCBs (Sum of total)	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene	Parathion	Pirimiphos-methyl	Pirimphos-ethyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl Ketone	2-hexanone (MBK)	4-Methyl-2-pentanone	Acetone	Allyl chloride
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
EQL						0.5		0.5			0.5			0.5	2		2					0.5					2					1	2	2	0.5	0.5		2		0.5	10	2	2	2	2	2	50	50	50		
Airport Regulations - Water pollution - accepted limits - fresh water														0.07																		0.001						0.004							4						
ANZG (2018) Freshwater 95% toxicant DGVs						0.15			0.2					0.05																								0.004					1000	3700	26						
ANZG (2018) Freshwater 99% toxicant DGVs						0.1			0.1					0.002																								0.0007					900	3000	9.9						
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
288413	6246761	WSI	WSA GW06	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
288413	6246761	WSI	WSA GW06	18-Dec-17	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.0005	-	<0.00001	<0.0005	-	-	-	-	-	<2	-	<0.0005	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
288413	6246761	WSI	WSA GW06	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
288413	6246761	WSI	WSA GW06	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	06-Sep-18	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.0002	<2	<0.2	<0.2	<2	<0.2	<2	<0.2	<2	-	<0.2	<2	<0.2	<0.002	-	<0.0002	-	<0.00005	<0.002	-	-	-	-	-	<2	<2	<0.02	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	12-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	0.016	<0.001
288413	6246761	WSI	WSA GW06	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	29-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
288413	6246761	WSI	WSA GW07	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Dec-17	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.0005	-	<0.00001	<0.0005	-	-	-	-	-	<2	-	<0.0005	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
288413	6246761	WSI	WSA GW07	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.005	<0.001
288413	6246761	WSI	WSA GW07	06-Sep-18	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.0002	<2	<0.2	<0.2	<2	<0.2	<2	<0.2	<2	-	<0.2	<2	<0.2	<0.002	-	<0.0002	-	<0.00005	<0.002	-	-	-	-	-	<2	<2	<0.02	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	13-Dec-18	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	<0.002	-	<0.0001	<0.002	-	-	-	-	-	<2	<2	<0.02	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
288413	6246761	WSI	WSA GW07	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
288413	6246761	WSI	WSA GW07	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	29-Mar-17	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.0001	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.0001	-	<0.0001	-	<0.00001	<0.0001	-	-	-	-	-	<0.1	-	<0.0001	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	06-Oct-17	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.0005	-	<0.00005	<0.0005	-	-	-	-	-	<2	-	<0.0005	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
288574	6246161	WSI	WSA GW04	18-Dec-17	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.0005	-	<0.00001	<0.0005	-	-	-	-	-	<2	-	<0.0005	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
288574	6246161	WSI	WSA GW04	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	0.01	<0.001
288574	6246161	WSI	WSA GW04	06-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.005	<0.001
288574	6246161	WSI	WSA GW04	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	12-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288838	6247416	WSI	SMGW-BH-C206	08-Sep-20	-	<2	-	<2	-	-	<2	-	-	<2	-	-	-	-	-	-	-	<2	-	-	-	-	<2	-	-	-	-	-	<2	<2	-	-	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
288852	6246085	WSI	SMGW-BH-C002	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288852	6246085	WSI	SMGW-BH-C002	06-Sep-19	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	<2	-	<2	-	-	-	-	<0.5	-	-	-	-	<2	-	-	-	-	<1	<2	<2	<0.5	<0.5	-	<2	-	<0.5	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
288878	6246774	WSI	SMGW-BH-C208	17-May-21	-	<2	-	<2	-	-	<2	-	-	<2	-	-	-	-	-	-	-	<2	-	-	-	-	<2	-	-	-	-	-	<2	<2	-	-	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
288970	6246102	WSI	SMGW-BH-C001S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
288970	6246102	WSI	SMGW-BH-C001S	06-Sep-19	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	<2	-	<2	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	<1	-	-	<0.5	<0.5	-	<2	-	<0.5	-	-	-	-	-	-	<50	<50	<50	-	-
289013	6246245	WSI	WSA GW08	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	29-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	15-Jun-17	<4	-	<4	<4	-	<4	<4	<4	<0.004	-	<4	<4	<4	<4	<4	<4	<4	-	<4	<4	<4	<0.004	-	<0.004	<0.001	<0.00001	<0.004	-	-	-	-	-	<4	-	<0.004	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
289013	6246245	WSI	WSA GW08	05-Oct-17	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.0005	-	<0.00005	<0.0005	-	-	-	-	-	<2	-	<0.0005	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Dec-17	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.0005	-	<0.00001	<0.0005	-	-	-	-	-	<2	-	<0.0005	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
289013	6246245	WSI	WSA GW08	19-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
289013	6246245	WSI	WSA GW08	06-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	13-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001

					Organophosphorous Pesticides																						Other					PCBs	Pesticides								Phthalates						Solvents				
					Disulfoton	Dimethoate	Ethoprop	Ethion	Fenitrothion	Fensulfothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	Acetophenone	Butyric Acid	Carbon Monoxide	Silica (SiO2)	Tebuconazole	PCBs (Sum of total)	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene	Parathion	Pirimiphos-methyl	Pirimiphos-ethyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl Ketone	2-hexanone (MBK)	4-Methyl-2-pentanone	Acetone	Allyl chloride
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
EQL						0.5		0.5			0.5			0.5	2		2					0.5					2					1	2	2	0.5	0.5		2		0.5	10	2	2	2	2	2	50	50	50		
Airport Regulations - Water pollution - accepted limits - fresh water														0.07																		0.001						0.004							4						
ANZG (2018) Freshwater 95% toxicant DGVs						0.15			0.2					0.05																								0.004					1000	3700	26						
ANZG (2018) Freshwater 99% toxicant DGVs						0.1			0.1					0.002																								0.0007					900	3000	9.9						
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
289013	6246245	WSI	WSA GW08	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	<1	<0.01	-	-	-	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	07-Oct-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	02-Dec-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289220	6247060	WSI	SMGW-BH-C331	29-Apr-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	-	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
289414	6246914	WSI	SMGW-BH-C325	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	0.005	<0.001
289595	6246615	WSI	SMGW-BH-C322	13-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
289595	6246615	WSI	SMGW-BH-C322	13-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289595	6246615	WSI	SMGW-BH-C322	13-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	<5	<0.005	<0.005
289599	6245794	Bringelly	SMGW-BH-D303S	18-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
289599	6245794	Bringelly	SMGW-BH-D303S	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
289601	6245801	Bringelly	SMGW-BH-D303	15-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	05-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289629	6246535	WSI	SMGW-BH-C320	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
289809	6246630	WSI	SMGW-BH-C321	13-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
290097	6245334	Bringelly	SMGW-BH-D305	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	0.007	<0.001
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290274	6248345	WSI	SMGW-BH-C201S	27-Aug-20	-	<2	-	<2	-	-	<2	-	-	<2	-	-	-	-	-	-	-	<2	-	-	-	-	<2	-	-	-	-	-	<2	<2	-	-	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
290279	6248348	WSI	SMGW-BH-C201	03-Sep-20	-	<2	-	<2	-	-	<2	-	-	<2	-	-	-	-	-	-	-	<2	-	-	-	-	<2	-	-	-	-	-	<2	<2	-	-	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
290304	6247361	WSI	SMGW-BH-C351	21-Apr-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	-	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
290390	6244794	Southern Tunnels	SMGW-BH-D205	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	28-Mar-17	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.0001	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.0001	-	<0.0001	-	<0.0001	<0.0001	-	-	-	-	-	<0.1	-	<0.0001	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
290461	6247764	WSI	WSA GW16	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.049	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
290461	6247764	WSI	WSA GW16	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
290461	6247764	WSI	WSA GW16	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	07-Sep-18	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	<0.002	-	<0.0001	<0.002	-	-	-	-	-	<2	<2	<0.02	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	12-Dec-18	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	<0.002	-	<0.0001	<0.002	-	-	-	-	-	<2	<2	<0.02	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
290461	6247764	WSI	WSA GW16	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290513	6244560	Southern Tunnels	SMGW-BH-D206	17-May-21	-	<2	-	<2	-	-	<2	-	-	<2	-	-	-	-	-	-	-	<2	-	-	-	-	<2	-	-	-	-	-	<2	<2	-	-	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
290677	6244060	Aerotropolis	SMGW-BH-D322	15-Mar-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
290695	6243992	Aerotropolis	SMGW-BH-D324	22-Feb-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	-	-	-	-	-	-	-	-	-	-	<2	<0.02	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
290695	6243992	Aerotropolis	SMGW-BH-D324	15-Mar-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	<1	<0.01	-	-	-	-	-	-	-	<1	-	<1	0.002	<0.001
290704	6243892	Aerotropolis	SMGW-BH-D326	18-Feb-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	-	-	-	-	-	-	-	-	-	-	<2	<0.02	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
290704	6243892	Aerotropolis	SMGW-BH-D326	16-Mar-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	<1	<0.01	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
290715	6243914	Aerotropolis	SMGW-BH-D308	18-Feb-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	-	-	-	-	-	-	-	-	-	-	<2	<0.02	-	-	-	-	-	-	-	<1	-	<1	0.002	<0.001
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	11-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	01-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	23-Feb-21	-	<2	-	<2	-	-	<2	-	-	<2	-	-	-	-	-	-	-	<2	-	-	-	-	<2	-	-	-	-	-	<2	<2	-	-	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	01-Sep-20	-	<2	-	<2	-	-	<2	-	-	<2	-	-	-	-	-	-	-	<2	-	-	-	-	<2	-	-	-	-	-	<2	<2	-	-	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

					Organophosphorous Pesticides																						Other					PCBs	Pesticides								Phthalates						Solvents				
					Disulfoton	Dimethoate	Ethoprop	Ethion	Fenitrothion	Fensulfothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	Acetophenone	Butyric Acid	Carbon Monoxide	Silica (SiO2)	Tebuconazole	PCBs (Sum of total)	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene	Parathion	Pirimiphos-methyl	Pirimphos-ethyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl Ketone	2-hexanone (MBK)	4-Methyl-2-pentanone	Acetone	Allyl chloride
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
EQL						0.5		0.5			0.5			0.5	2		2					0.5					2					1	2	2	0.5	0.5		2		0.5	10	2	2	2	2	2	50	50	50		
Airport Regulations - Water pollution - accepted limits - fresh water														0.07																		0.001						0.004							4						
ANZG (2018) Freshwater 95% toxicant DGVs						0.15			0.2					0.05																								0.004					1000	3700	26						
ANZG (2018) Freshwater 99% toxicant DGVs						0.1			0.1					0.002																								0.0007					900	3000	9.9						
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290720	6243765	Aerotropolis	SMGW-BH-D329	18-Feb-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	-	-	-	-	-	-	-	-	-	-	<2	<0.02	-	-	-	-	-	-	-	<1	-	<1	0.001	<0.001
290720	6243765	Aerotropolis	SMGW-BH-D329	16-Mar-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	<1	<0.01	-	-	-	-	-	-	-	<1	-	<1	0.002	<0.001
290742	6243691	Aerotropolis	SMGW-BH-D208	17-May-21	-	<2	-	<2	-	-	<2	-	-	<2	-	-	-	-	-	-	-	<2	-	-	-	-	<2	-	-	-	-	-	<2	<2	-	-	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
290762	6248715	WSI	SMGW-BH-C305	20-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
290762	6248715	WSI	SMGW-BH-C305	12-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
290945	6248669	WSI	SMGW-BH-C304	20-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
290964	6253779	Luddenham Road	SMGW-BH-B120	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
290964	6253779	Luddenham Road	SMGW-BH-B120	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291041	6254012	Luddenham Road	SMGW-BH-B320	15-Apr-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	-	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	<2	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	<20	<2	<2	<2	<2	<2	<1	-	<1	<0.001	<0.001
291173	6254264	Luddenham Road	SMGW-BH-B319	02-Mar-21	-	<2	-	<2	-	-	<2	-	-	<2	-	-	-	-	-	-	-	<2	-	-	-	-	<2	-	-	-	-	-	<2	<2	-	-	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
291173	6254264	Luddenham Road	SMGW-BH-B319	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	28-Mar-17	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.0001	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.0001	-	<0.0001	-	<0.00001	<0.0001	-	-	-	-	-	<0.1	-	<0.0001	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	04-Oct-17	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.0005	-	<0.00005	<0.0005	-	-	-	-	-	<2	-	<0.0005	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Dec-17	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.0005	-	<0.00001	<0.0005	-	-	-	-	-	<2	-	<0.0005	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
291265	6247780	WSI	WSA GW23	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	05-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
291265	6247780	WSI	WSA GW23	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	13-Dec-18	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	<0.002	-	<0.0001	<0.002	-	-	-	-	-	<2	<2	<0.02	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
291265	6247780	WSI	WSA GW23	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	<0.15	-	<0.2	<0.2	-	-	-	-	<0.05	<0.2	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
291326	6249157	WSI	SMGW-BH-C302	12-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
291326	6249157	WSI	SMGW-BH-C302	12-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	12-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<2	-	<2	<0.002	<0.002
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	-	<0.15	-	<0.2	<0.2	-	-	-	-	<0.05	<0.2	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<2	-	<2	<0.002	<0.002
291351	6247890	WSI	SMGW-BH-C343	20-Apr-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	-	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	-	-	-	-	-
291370	6249349	WSI	SMGW-BH-C301	15-Apr-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291504	6255514	Luddenham Road	SMGW-BH-B313	10-May-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	<5	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	<5	<5	<5	<5	12	<5	<1	-	<1	<0.001	<0.001
291542	6248270	WSI	SMGW-BH-C340	20-Apr-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	-	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	-	-	-	-	-
291562	6255942	Luddenham Road	SMGW-BH-B312	12-Feb-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	-	-	-	-	-	-	-	-	-	-	<2	<0.02	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
291562	6255942	Luddenham Road	SMGW-BH-B312	16-Mar-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	<1	<0.01	-	-	-	-	-	-	-	<1	-	<1	0.002	<0.001
291572	6256049	Luddenham Road	SMGW-BH-B109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	<2	-	<2	-	-	-	-	<0.5	-	-	-	-	<2	-	-	-	-	<1	<2	<2	<0.5	<0.5	-	<2	-	<0.5	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	31-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	26-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	-	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	-	<0.2	-	<0.2	<0.2	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	-	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	<2	-	<2	-	-	-	-	<0.5	-	-	-	-	<2	-	-	-	-	<1	<2	<2	<0.5	<0.5	-	<2	-	<0.5	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
291737	6259192	Orchard Hills	SMGW-BH-A310	21-Apr-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	-	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	<1	-	<1	0.002	<0.001

					Organophosphorous Pesticides																						Other					PCBs	Pesticides								Phthalates						Solvents				
					Disulfoton	Dimethoate	Ethoprop	Ethion	Fenitrothion	Fensulfothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	Acetophenone	Butyric Acid	Carbon Monoxide	Silica (SiO2)	Tebuconazole	PCBs (Sum of total)	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene	Parathion	Pirimiphos-methyl	Pirimphos-ethyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl Ketone	2-hexanone (MBK)	4-Methyl-2-pentanone	Acetone	Allyl chloride
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
EQL						0.5		0.5			0.5			0.5	2		2					0.5					2					1	2	2	0.5	0.5		2		0.5	10	2	2	2	2	2	50	50	50		
Airport Regulations - Water pollution - accepted limits - fresh water														0.07																		0.001						0.004							4						
ANZG (2018) Freshwater 95% toxicant DGVs						0.15			0.2					0.05																								0.004					1000	3700	26						
ANZG (2018) Freshwater 99% toxicant DGVs						0.1			0.1					0.002																								0.0007					900	3000	9.9						
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
291737	6259191	Orchard Hills	SMGW-BH-A310S	26-Apr-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	-	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
291738	6248976	WSI	WSA GW19	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	04-Oct-17	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.0005	-	<0.00005	<0.0005	-	-	-	-	-	<2	-	<0.0005	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
291738	6248976	WSI	WSA GW19	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	19-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
291738	6248976	WSI	WSA GW19	07-Sep-18	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	<0.002	-	<0.0001	<0.002	-	-	-	-	-	<2	<2	<0.02	-	-	-	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	14-Dec-18	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	<0.001	0.19	<0.00001	<0.001	-	-	-	-	-	<1	<1	<0.01	-	-	-	-	-	-	-	-	-	-	-	-
291738	6259051	Orchard Hills	SMGW-BH-A311	11-May-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
291769	6260026	Northern Tunnels	SMGW-BH-A123	28-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-May-20	-	<2	-	<2	-	-	<2	-	-	<2	-	-	-	-	-	-	-	<2	-	-	-	-	<2	-	-	-	-	-	<2	<2	-	-	-	-	-	<2	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-Nov-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291836	6257203	Luddenham Road	SMGW-BH-B309	02-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	<50	<50	-	-
291848	6248251	WSI	SMGW-BH-C341	20-Apr-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	-	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	23-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	20-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
291953	6260516	Northern Tunnels	SMGW-BH-A019	06-Sep-19	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	<2	-	<2	-	-	-	-	<0.5	-	-	-	-	<2	-	-	-	-	<1	<2	<2	<0.5	<0.5	-	<2	-	<0.5	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
292033	6257200	Luddenham Road	SMGW-BH-B308	02-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	<50	<50	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<5	<5	<5	<5	<5	<1	-	<1	<0.001	<0.001
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	<1	<0.01	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
292038	6261300	Claremont Meadow	SMGW-BH-A109	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	30-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	28-Mar-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
292130	6249000	WSI	WSA GW20	14-Jun-17	<4	-	<4	<4	-	<4	<4	<4	<0.004	-	<4	<4	<4	<4	<4	<4	<4	-	<4	<4	<4	<0.004	-	<0.004	0.011	<0.00001	<0.004	-	-	-	-	-	<4	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	19-Dec-17	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.0005	-	<0.00001	<0.0005	-	-	-	-	-	<2	-	<0.0005	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
292130	6249000	WSI	WSA GW20	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.005	<0.001

					Organophosphorous Pesticides																						Other					PCBs	Pesticides								Phthalates						Solvents				
					Disulfoton	Dimethoate	Ethoprop	Ethion	Fenitrothion	Fensulfothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	Acetophenone	Butyric Acid	Carbon Monoxide	Silica (SiO2)	Tebuconazole	PCBs (Sum of total)	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene	Parathion	Pirimiphos-methyl	Pirimphos-ethyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl Ketone	2-hexanone (MBK)	4-Methyl-2-pentanone	Acetone	Allyl chloride
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
EQL						0.5		0.5			0.5			0.5	2		2					0.5					2					1	2	2	0.5	0.5		2		0.5	10	2	2	2	2	2	50	50	50		
Airport Regulations - Water pollution - accepted limits - fresh water														0.07																		0.001						0.004							4						
ANZG (2018) Freshwater 95% toxicant DGVs						0.15			0.2					0.05																								0.004					1000	3700	26						
ANZG (2018) Freshwater 99% toxicant DGVs						0.1			0.1					0.002																								0.0007					900	3000	9.9						
PFAS NEMP 2018 Table 5 Freshwater 99%																																																			
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date																																															
292130	6249000	WSI	WSA GW20	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	05-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
292130	6249000	WSI	WSA GW20	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	03-Apr-19	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	<1	<0.01	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	28-Mar-17	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.0001	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.0001	-	<0.0001	-	<0.0000	<0.0001	-	-	-	-	-	<0.1	-	<0.0001	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
292130	6249000	WSI	WSA GW21	15-Jun-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	04-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	06-Oct-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	19-Dec-17	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.0005	-	<0.0005	-	<0.0000	<0.0005	-	-	-	-	-	<2	-	<0.0005	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
292130	6249000	WSI	WSA GW21	21-Dec-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	17-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	18-Apr-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Jul-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
292130	6249000	WSI	WSA GW21	05-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	07-Sep-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Dec-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
292130	6249000	WSI	WSA GW21	05-Apr-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	06-Sep-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	05-Sep-19	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	<2	-	<2	-	-	-	-	<0.5	-	-	-	-	<2	-	-	-	-	<1	<2	<2	<0.5	<0.5	-	<2	-	<0.5	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	16-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Dec-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Mar-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	26-May-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	18-Mar-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001	-	-	-	-	-	-	-	-	-	-	-	<1	<0.01	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	0.002	<0.001
294051	6261946	St Marys	SMGW-BH-A102	06-Mar-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	05-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	18-Dec-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	24-Jan-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Mar-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	20-Apr-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	27-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Organophosphorous Pesticides																					
					Disulfoton	Dimethoate	Ethoprop	Ethion	Fenitrothion	Fensulfothion	Fenthion	EPN	Merphos	Malathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Prothiofos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
EQL						0.5		0.5			0.5			0.5	2		2					0.5				
Airport Regulations - Water pollution - accepted limits - fresh water														0.07												
ANZG (2018) Freshwater 95% toxicant DGVs						0.15			0.2					0.05												
ANZG (2018) Freshwater 99% toxicant DGVs						0.1			0.1					0.002												
PFAS NEMP 2018 Table 5 Freshwater 99%																										
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	<2	-	<2	-	-	-	-	<0.5	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<0.002
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<0.001
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date	Other					PCBs	Pesticides								Phthalates						Solvents				
					Acetophenone	Butyric Acid	Carbon Monoxide	Silica (SiO2)	Tebuconazole	PCBs (Sum of total)	Chlorobenzilate	Carbazole	Demeton-S-methyl	Fenamiphos	Methoprene	Parathion	Pirimiphos-methyl	Pirimphos-ethyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl Ketone	2-hexanone (MBK)	4-Methyl-2-pentanone	Acetone	Allyl chloride
					µg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
EQL					2					1	2	2	0.5	0.5		2		0.5	10	2	2	2	2	2	50	50	50		
Airport Regulations - Water pollution - accepted limits - fresh water										0.001						0.004							4						
ANZG (2018) Freshwater 95% toxicant DGVs																0.004					1000	3700	26						
ANZG (2018) Freshwater 99% toxicant DGVs																0.0007					900	3000	9.9						
PFAS NEMP 2018 Table 5 Freshwater 99%																													
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	<2	-	-	-	-	<1	<2	<2	<0.5	<0.5	-	<2	-	<0.5	<10	<2	<2	<2	<2	<2	<50	<50	<50	-	-
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	-	-	-	-	-	-	-	-	-	-	-	<2	<0.02	-	-	-	-	-	-	-	<1	-	<1	<0.001	<0.001
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	<1	<0.01	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	-	-	-	-	-	-	-	-	-	-	-	<2	<0.02	-	-	-	-	-	-	-	<1	-	<1	0.002	<0.001
294200	6261915	St Marys	SMGW-BH-A321S	23-Apr-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	-	-	-	-	-	<1	<0.01	-	-	-	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

									Volatile Organic Compounds				
					Carbon disulfide	Cyclohexane	Isophorone	Vinyl acetate	1,3,5-Trinitrobenzene	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene	Dibenz(a,j)acridine	Pentachloroethane
					µg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	mg/L	µg/L
EQL					5		2	50	0.002	5	5		5
Airport Regulations - Water pollution - accepted limits - fresh water													
ANZG (2018) Freshwater 95% toxicant DGVs													
ANZG (2018) Freshwater 99% toxicant DGVs													
PFAS NEMP 2018 Table 5 Freshwater 99%													
x_coord	**y_coord**	**Monitoring_Zone**	**Location_Code**	**Sampled_Date**									
288413	6246761	WSI	WSA GW06	28-Mar-17	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-17	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	15-Jun-17	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	06-Oct-17	<1	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	18-Dec-17	<1	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	19-Dec-17	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	17-Apr-18	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	18-Apr-18	<1	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	03-Jul-18	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Jul-18	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	06-Sep-18	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	07-Sep-18	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	12-Dec-18	<1	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	14-Dec-18	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	04-Apr-19	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW06	05-Apr-19	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	28-Mar-17	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	29-Mar-17	<1	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	15-Jun-17	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	06-Oct-17	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Dec-17	<1	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	19-Dec-17	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	17-Apr-18	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	18-Apr-18	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	03-Jul-18	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Jul-18	<1	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	06-Sep-18	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	07-Sep-18	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	13-Dec-18	<1	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	14-Dec-18	-	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	04-Apr-19	<1	-	-	-	-	-	-	-	-
288413	6246761	WSI	WSA GW07	05-Apr-19	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	28-Mar-17	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	29-Mar-17	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	15-Jun-17	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	06-Oct-17	<1	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Dec-17	<1	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	19-Dec-17	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	17-Apr-18	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	18-Apr-18	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	03-Jul-18	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Jul-18	<1	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	06-Sep-18	<1	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	07-Sep-18	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	12-Dec-18	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	14-Dec-18	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	04-Apr-19	-	-	-	-	-	-	-	-	-
288574	6246161	WSI	WSA GW04	05-Apr-19	-	-	-	-	-	-	-	-	-
288838	6247416	WSI	SMGW-BH-C206	08-Sep-20	<5	-	<2	<50	<0.002	<5	<5	-	<5
288852	6246085	WSI	SMGW-BH-C002	27-Aug-20	-	-	-	-	-	-	-	-	-
288852	6246085	WSI	SMGW-BH-C002	06-Sep-19	<5	-	<2	<50	<0.002	<5	<5	-	<5
288878	6246774	WSI	SMGW-BH-C208	17-May-21	<5	-	<2	<50	<0.002	<5	<5	-	<5
288970	6246102	WSI	SMGW-BH-C001S	27-Aug-20	-	-	-	-	-	-	-	-	-
288970	6246102	WSI	SMGW-BH-C001S	06-Sep-19	<5	-	-	<50	-	<5	<5	-	<5
289013	6246245	WSI	WSA GW08	28-Mar-17	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	29-Mar-17	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	15-Jun-17	<1	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	05-Oct-17	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	06-Oct-17	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Dec-17	<1	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	19-Dec-17	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	17-Apr-18	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	18-Apr-18	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	03-Jul-18	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Jul-18	3	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	06-Sep-18	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	07-Sep-18	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	13-Dec-18	<1	-	-	-	-	-	-	-	-

									Volatile Organic Compounds				
					Carbon disulfide	Cyclohexane	Isophorone	Vinyl acetate	1,3,5-Trinitrobenzene	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene	Dibenz(a,j)acridine	Pentachloroethane
					µg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	mg/L	µg/L
EQL					5		2	50	0.002	5	5		5
Airport Regulations - Water pollution - accepted limits - fresh water													
ANZG (2018) Freshwater 95% toxicant DGVs													
ANZG (2018) Freshwater 99% toxicant DGVs													
PFAS NEMP 2018 Table 5 Freshwater 99%													
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date									
289013	6246245	WSI	WSA GW08	14-Dec-18	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	04-Apr-19	-	-	-	-	-	-	-	-	-
289013	6246245	WSI	WSA GW08	05-Apr-19	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	07-Oct-20	-	-	-	-	-	-	-	-	-
289128	6246455	WSI	SMGW-BH-C209	02-Dec-20	-	-	-	-	-	-	-	-	-
289220	6247060	WSI	SMGW-BH-C331	29-Apr-21	<1	-	-	-	-	-	-	-	-
289414	6246914	WSI	SMGW-BH-C325	29-Apr-21	<1	-	-	-	-	-	-	-	-
289595	6246615	WSI	SMGW-BH-C322	13-May-21	<1	-	-	-	-	-	-	-	-
289595	6246615	WSI	SMGW-BH-C322	13-May-21	-	-	-	-	-	-	-	-	-
289595	6246615	WSI	SMGW-BH-C322	13-May-21	<5	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	18-Feb-21	<1	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	15-Mar-21	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-
289599	6245794	Bringelly	SMGW-BH-D303S	05-May-21	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	17-Feb-21	<1	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	15-Mar-21	-	-	-	-	-	-	-	-	-
289601	6245801	Bringelly	SMGW-BH-D303	05-May-21	-	-	-	-	-	-	-	-	-
289629	6246535	WSI	SMGW-BH-C320	29-Apr-21	<1	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<1	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	-	<0.001	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	29-Apr-21	<1	-	-	-	-	-	-	-	-
289809	6246630	WSI	SMGW-BH-C321	13-May-21	<1	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	15-Feb-21	<1	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-
290097	6245334	Bringelly	SMGW-BH-D305	10-May-21	-	-	-	-	-	-	-	-	-
290274	6248345	WSI	SMGW-BH-C201S	27-Aug-20	<5	-	<2	<50	<0.002	<5	<5	-	<5
290279	6248348	WSI	SMGW-BH-C201	03-Sep-20	<5	-	<2	<50	<0.002	<5	<5	-	<5
290304	6247361	WSI	SMGW-BH-C351	21-Apr-21	<1	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	27-Nov-20	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	17-Feb-21	-	-	-	-	-	-	-	-	-
290390	6244794	Southern Tunnels	SMGW-BH-D205	26-May-21	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	28-Mar-17	<1	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	14-Jun-17	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	15-Jun-17	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Oct-17	<1	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	06-Oct-17	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	17-Apr-18	<1	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	03-Jul-18	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Jul-18	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	07-Sep-18	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	12-Dec-18	<1	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	03-Apr-19	-	-	-	-	-	-	-	-	-
290461	6247764	WSI	WSA GW16	05-Apr-19	-	-	-	-	-	-	-	-	-
290513	6244560	Southern Tunnels	SMGW-BH-D206	17-May-21	<5	-	<2	<50	<0.002	<5	<5	-	<5
290677	6244060	Aerotropolis	SMGW-BH-D322	15-Mar-21	<1	-	-	-	-	-	-	-	-
290695	6243992	Aerotropolis	SMGW-BH-D324	22-Feb-21	<1	-	-	-	-	-	-	-	-
290695	6243992	Aerotropolis	SMGW-BH-D324	15-Mar-21	<1	-	-	-	-	-	-	-	-
290704	6243892	Aerotropolis	SMGW-BH-D326	18-Feb-21	<1	-	-	-	-	-	-	-	-
290704	6243892	Aerotropolis	SMGW-BH-D326	16-Mar-21	<1	-	-	-	-	-	-	-	-
290715	6243914	Aerotropolis	SMGW-BH-D308	18-Feb-21	<1	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jun-20	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Aug-20	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	27-Nov-20	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	29-Jul-20	-	-	-	-	-	-	-	-	-
290715	6243825	Aerotropolis	SMGW-BH-D109	15-Feb-21	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	11-Aug-20	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Aug-20	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	28-Sep-20	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	27-Nov-20	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	01-Feb-21	-	-	-	-	-	-	-	-	-
290716	6243821	Aerotropolis	SMGW-BH-D109S	23-Feb-21	<5	-	<2	<50	<0.002	<5	<5	-	<5
290716	6244026	Aerotropolis	SMGW-BH-D207	01-Sep-20	<5	-	<2	<50	<0.002	<5	<5	-	<5
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-

x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date					Volatile Organic Compounds				
					Carbon disulfide	Cyclohexane	Isophorone	Vinyl acetate	1,3,5-Trinitrobenzene	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene	Dibenz(a,j)acridine	Pentachloroethane
					µg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	mg/L	µg/L
EQL					5		2	50	0.002	5	5		5
Airport Regulations - Water pollution - accepted limits - fresh water													
ANZG (2018) Freshwater 95% toxicant DGVs													
ANZG (2018) Freshwater 99% toxicant DGVs													
PFAS NEMP 2018 Table 5 Freshwater 99%													
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	28-Sep-20	-	-	-	-	-	-	-	-	-
290716	6244026	Aerotropolis	SMGW-BH-D207	17-May-21	-	-	-	-	-	-	-	-	-
290720	6243765	Aerotropolis	SMGW-BH-D329	18-Feb-21	<1	-	-	-	-	-	-	-	-
290720	6243765	Aerotropolis	SMGW-BH-D329	16-Mar-21	<1	-	-	-	-	-	-	-	-
290742	6243691	Aerotropolis	SMGW-BH-D208	17-May-21	<5	-	<2	<50	<0.002	<5	<5	-	<5
290762	6248715	WSI	SMGW-BH-C305	20-Apr-21	<1	-	-	-	-	-	-	-	-
290762	6248715	WSI	SMGW-BH-C305	12-May-21	<1	-	-	-	-	-	-	-	-
290945	6248669	WSI	SMGW-BH-C304	20-Apr-21	<1	-	-	-	-	-	-	-	-
290964	6253779	Luddenham Road	SMGW-BH-B120	26-Aug-20	-	-	-	-	-	-	-	-	-
290964	6253779	Luddenham Road	SMGW-BH-B120	23-Feb-21	-	-	-	-	-	-	-	-	-
291041	6254012	Luddenham Road	SMGW-BH-B320	15-Apr-21	<1	-	-	-	-	-	-	<0.005	-
291173	6254264	Luddenham Road	SMGW-BH-B319	02-Mar-21	<5	-	<2	<50	<0.002	<5	<5	-	<5
291173	6254264	Luddenham Road	SMGW-BH-B319	26-May-21	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	28-Mar-17	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	04-Oct-17	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	06-Oct-17	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Dec-17	<1	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	17-Apr-18	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	19-Apr-18	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Jul-18	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	05-Sep-18	<1	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	07-Sep-18	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	13-Dec-18	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	14-Dec-18	-	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	03-Apr-19	<1	-	-	-	-	-	-	-	-
291265	6247780	WSI	WSA GW23	05-Apr-19	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	15-Apr-21	<1	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<1	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	12-May-21	-	-	-	-	-	-	-	-	-
291326	6249157	WSI	SMGW-BH-C302	12-May-21	<1	-	-	-	-	-	-	-	-
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<2	-	-	-	-	-	-	-	-
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	-	<0.001	-	-	-	-	-	-	-
291331	6251967	Luddenham Road	SMGW-BH-B325	27-Apr-21	<2	-	-	-	-	-	-	-	-
291351	6247890	WSI	SMGW-BH-C343	20-Apr-21	-	-	-	-	-	-	-	-	-
291370	6249349	WSI	SMGW-BH-C301	15-Apr-21	<1	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jul-20	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	26-Aug-20	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	30-Jun-20	-	-	-	-	-	-	-	-	-
291379	6250043	Luddenham Road	SMGW-BH-B130	17-Feb-21	-	-	-	-	-	-	-	-	-
291504	6255514	Luddenham Road	SMGW-BH-B313	10-May-21	<1	-	-	-	-	-	-	<0.005	-
291542	6248270	WSI	SMGW-BH-C340	20-Apr-21	-	-	-	-	-	-	-	-	-
291562	6255942	Luddenham Road	SMGW-BH-B312	12-Feb-21	<1	-	-	-	-	-	-	-	-
291562	6255942	Luddenham Road	SMGW-BH-B312	16-Mar-21	<1	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	30-Jun-20	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	26-Aug-20	-	-	-	-	-	-	-	-	-
291572	6256049	Luddenham Road	SMGW-BH-B109	22-Feb-21	-	-	-	-	-	-	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	-	-	-	-	-	-	-	-	-
291601	6262451	Northern Tunnels	SMGW-BH-A012	05-Sep-19	<5	-	<2	<50	<0.002	<5	<5	-	<5
291703	6256950	Luddenham Road	SMGW-BH-B106	30-Jun-20	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	31-Jul-20	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	26-Aug-20	-	-	-	-	-	-	-	-	-
291703	6256950	Luddenham Road	SMGW-BH-B106	15-Feb-21	-	-	-	-	-	-	-	-	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<1	-	-	-	-	-	-	-	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	-	<0.001	-	-	-	-	-	-	-
291727	6258864	Orchard Hills	SMGW-BH-A315	26-Apr-21	<1	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	18-Dec-19	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Jan-20	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	20-Apr-20	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	25-Aug-20	-	-	-	-	-	-	-	-	-
291728	6258996	Orchard Hills	SMGW-BH-A017	05-Sep-19	<5	-	<2	<50	<0.002	<5	<5	-	<5
291737	6259192	Orchard Hills	SMGW-BH-A310	21-Apr-21	<1	-	-	-	-	-	-	-	-

									Volatile Organic Compounds				
					Carbon disulfide	Cyclohexane	Isophorone	Vinyl acetate	1,3,5-Trinitrobenzene	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene	Dibenz(a,j)acridine	Pentachloroethane
					µg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	mg/L	µg/L
EQL					5		2	50	0.002	5	5		5
Airport Regulations - Water pollution - accepted limits - fresh water													
ANZG (2018) Freshwater 95% toxicant DGVs													
ANZG (2018) Freshwater 99% toxicant DGVs													
PFAS NEMP 2018 Table 5 Freshwater 99%													
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date									
291737	6259191	Orchard Hills	SMGW-BH-A310S	26-Apr-21	<1	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	28-Mar-17	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	14-Jun-17	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	15-Jun-17	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	04-Oct-17	<1	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	06-Oct-17	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	17-Apr-18	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	19-Apr-18	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	03-Jul-18	<1	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	07-Sep-18	-	-	-	-	-	-	-	-	-
291738	6248976	WSI	WSA GW19	14-Dec-18	-	-	-	-	-	-	-	-	-
291738	6259051	Orchard Hills	SMGW-BH-A311	11-May-21	<1	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	28-May-20	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	01-Jul-20	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	30-Jul-20	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	20-Aug-20	-	-	-	-	-	-	-	-	-
291769	6260026	Northern Tunnels	SMGW-BH-A123	17-Feb-21	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-May-20	<5	-	<2	<50	<0.002	<5	<5	-	<5
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jun-20	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	30-Jul-20	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	25-Aug-20	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	27-Nov-20	-	-	-	-	-	-	-	-	-
291786	6259594	Orchard Hills	SMGW-BH-A113	15-Feb-21	-	-	-	-	-	-	-	-	-
291836	6257203	Luddenham Road	SMGW-BH-B309	02-Mar-21	<5	-	-	<50	-	<5	<5	-	<5
291848	6248251	WSI	SMGW-BH-C341	20-Apr-21	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	26-May-20	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	29-Jun-20	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	25-Aug-20	-	-	-	-	-	-	-	-	-
291855	6258838	Orchard Hills	SMGW-BH-A117	17-Feb-21	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-May-20	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jun-20	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	29-Jul-20	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	27-Aug-20	-	-	-	-	-	-	-	-	-
291857	6258838	Orchard Hills	SMGW-BH-A117S	23-Feb-21	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	26-May-20	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	30-Jun-20	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	20-Aug-20	-	-	-	-	-	-	-	-	-
291893	6260308	Northern Tunnels	SMGW-BH-A122	17-Feb-21	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jun-20	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	30-Jul-20	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	20-Aug-20	-	-	-	-	-	-	-	-	-
291915	6260719	Northern Tunnels	SMGW-BH-A111	17-Feb-21	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jun-20	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	30-Jul-20	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	20-Aug-20	-	-	-	-	-	-	-	-	-
291944	6260883	Northern Tunnels	SMGW-BH-A121	17-Feb-21	-	-	-	-	-	-	-	-	-
291953	6260516	Northern Tunnels	SMGW-BH-A019	06-Sep-19	9	-	<2	<50	<0.002	<5	<5	-	<5
292033	6257200	Luddenham Road	SMGW-BH-B308	02-Mar-21	<5	-	-	<50	-	<5	<5	-	<5
292037	6261297	Claremont Meadow	SMGW-BH-A109S	26-May-20	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	30-Jun-20	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	25-Aug-20	-	-	-	-	-	-	-	-	-
292037	6261297	Claremont Meadow	SMGW-BH-A109S	17-Feb-21	-	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	<1	<0.001	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	<1	-	-	-	-	-	-	-	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	12-Feb-21	<1	-	-	-	-	-	-	<0.005	-
292037	6261246	Claremont Meadow	SMGW-BH-A304	16-Mar-21	<1	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	26-May-20	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	30-Jun-20	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	25-Aug-20	-	-	-	-	-	-	-	-	-
292038	6261300	Claremont Meadow	SMGW-BH-A109	17-Feb-21	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	28-Mar-17	<1	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Jun-17	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	15-Jun-17	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	04-Oct-17	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	06-Oct-17	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	19-Dec-17	<1	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	17-Apr-18	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	18-Apr-18	<1	-	-	-	-	-	-	-	-

									Volatile Organic Compounds				
					Carbon disulfide	Cyclohexane	Isophorone	Vinyl acetate	1,3,5-Trinitrobenzene	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene	Dibenz(a.j)acridine	Pentachloroethane
					µg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	mg/L	µg/L
EQL					5		2	50	0.002	5	5		5
Airport Regulations - Water pollution - accepted limits - fresh water													
ANZG (2018) Freshwater 95% toxicant DGVs													
ANZG (2018) Freshwater 99% toxicant DGVs													
PFAS NEMP 2018 Table 5 Freshwater 99%													
x_coord	y_coord	Monitoring_Zone	Location_Code	Sampled_Date									
292130	6249000	WSI	WSA GW20	03-Jul-18	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	05-Sep-18	<1	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	07-Sep-18	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	14-Dec-18	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	03-Apr-19	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW20	05-Apr-19	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	28-Mar-17	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Jun-17	<1	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	15-Jun-17	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	04-Oct-17	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	06-Oct-17	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	19-Dec-17	<1	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	21-Dec-17	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	17-Apr-18	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	18-Apr-18	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Jul-18	<1	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	05-Sep-18	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	07-Sep-18	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	14-Dec-18	-	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	03-Apr-19	<1	-	-	-	-	-	-	-	-
292130	6249000	WSI	WSA GW21	05-Apr-19	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	26-May-20	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	29-Jun-20	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	25-Aug-20	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107	16-Feb-21	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-May-20	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	29-Jun-20	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	15-Feb-21	-	-	-	-	-	-	-	-	-
292413	6261713	Northern Tunnels	SMGW-BH-A107S	27-Aug-20	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	06-Sep-19	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	18-Dec-19	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Jan-20	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	20-Apr-20	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	-	-	-	-	-	-	-	-	-
292892	6262062	Northern Tunnels	SMGW-BH-A011S	05-Sep-19	<5	-	<2	<50	<0.002	<5	<5	-	<5
292892	6262062	Northern Tunnels	SMGW-BH-A011S	27-Aug-20	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	26-May-20	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	01-Jul-20	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	25-Aug-20	-	-	-	-	-	-	-	-	-
293098	6262002	Northern Tunnels	SMGW-BH-A105	16-Feb-21	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	26-May-20	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	25-Aug-20	-	-	-	-	-	-	-	-	-
293100	6261999	Northern Tunnels	SMGW-BH-A105S	16-Feb-21	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Dec-20	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	02-Mar-21	-	-	-	-	-	-	-	-	-
293937	6261970	St Marys	SMGW-BH-A202	26-May-21	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	18-Mar-21	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Apr-21	-	-	-	-	-	-	-	-	-
293999	6261951	St Marys	SMGW-BH-A302	22-Feb-21	<1	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	06-Mar-20	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	05-Jun-20	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jul-20	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	27-Aug-20	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	22-Apr-21	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	29-Jun-20	-	-	-	-	-	-	-	-	-
294051	6261946	St Marys	SMGW-BH-A102	15-Feb-21	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	18-Dec-19	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	24-Jan-20	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Mar-20	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	20-Apr-20	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	27-Aug-20	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-

									Volatile Organic Compounds				
					Carbon disulfide	Cyclohexane	Isophorone	Vinyl acetate	1,3,5-Trinitrobenzene	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene	Dibenz(a.j)acridine	Pentachloroethane
					µg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	mg/L	µg/L
EQL					5		2	50	0.002	5	5		5
Airport Regulations - Water pollution - accepted limits - fresh water													
ANZG (2018) Freshwater 95% toxicant DGVs													
ANZG (2018) Freshwater 99% toxicant DGVs													
PFAS NEMP 2018 Table 5 Freshwater 99%													
x_coord	**y_coord**	**Monitoring_Zone**	**Location_Code**	**Sampled_Date**									
294138	6261944	St Marys	SMGW-BH-A002	22-Apr-21	-	-	-	-	-	-	-	-	-
294138	6261944	St Marys	SMGW-BH-A002	06-Sep-19	<5	-	<2	<50	<0.002	<5	<5	-	<5
294200	6261917	St Marys	SMGW-BH-A321	12-Feb-21	<1	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	23-Apr-21	-	-	-	-	-	-	-	-	-
294200	6261917	St Marys	SMGW-BH-A321	18-Mar-21	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	18-Feb-21	<1	-	-	-	-	-	-	-	-
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294200	6261915	St Marys	SMGW-BH-A321S	18-Mar-21	-	-	-	-	-	-	-	-	-
294200	6261915	St Marys	SMGW-BH-A321S	22-Feb-21	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	01-Jul-20	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	29-Jul-20	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	25-Aug-20	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	17-Feb-21	-	-	-	-	-	-	-	-	-
294351	6261870	St Marys	SMGW-BH-A103	26-May-20	-	-	-	-	-	-	-	-	-

Annexure B Surface Water Quality Monitoring Program

SYDNEY METRO - WESTERN SYDNEY AIRPORT
STATION BOXES AND TUNNELLING WORKS

Surface Water Quality Monitoring Program

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works

Project number	WSA-200-SBT
Document number	SMWSASBT-CPG-1NL-NL000-WA-PRG-000001
Revision date	21 September 2022
Revision	1

Document approval

Rev	Date	Prepared by	Reviewed by	Remarks	Signature
A	22/04/2022	A. Macleod (SEEC)	S. Anstee	Nil	
B	24/05/2022	A. Macleod (SEEC)	D. Corish	Nil	
0	11/08/2022	D. Corish	E. Kline	Nil	
1	21/08/2022	D. Corish	E. Kline	Nil	EKline

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Glossary

Abbreviation	Meaning
CEMP	Construction Environmental Management Plan
Condition	Condition of Approval
CPBG	CPB Contractors Ghella Joint Venture
DPE	Department of Planning and Environment
EC	Electrical Conductivity
EIS	Environmental Impact Statement
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EPL	Environment Protection Licence
ER	Environmental Representative
Project	Sydney Metro Western Sydney Airport
REMM	Revised Environmental Management Measures
SBT Works	Station Boxes and Tunnelling Works
SSTV	Site Specific Trigger Values
SWMP	Soil and Water Management Sub-Plan
SWQMP	Surface Water Quality Monitoring Program (this document)
TBM	Tunnel boring machine
TDS	Total Dissolved Solids
TSS	Total Suspended Solids
WSA	Western Sydney International Airport
WTP	Water Treatment Plant

1. Introduction

1.1. Project overview

This NSW (Off-airport) Surface Water Quality Monitoring Program (SWQMP) is applicable to the Station Boxes and Tunnelling Works (SBT Works) Package of the Sydney Metro Western Sydney Airport (the Project) and is an Appendix of the Soil and Water Management Sub-Plan (SWMP). This SWQMP describes how the CPB Contractors Ghella Joint Venture (CPBG) will monitor the surface water impacts of the SBT Works in NSW.

The Project forms part of the broader Sydney Metro network. It involves the construction and operation of a new 23km metro rail line 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 tunnels and civil structures, including a viaduct, bridges, and surface and open-cut troughs between the two tunnel sections (Figure 1).

The Project will be delivered through several works packages including the SBT Works, which includes the design and construction of:

- Two sections of twin tunnels with a combined length of approximately 9.8km, plus associated portal structures, one from Orchard Hills to St Marys and the other under Western Sydney International (WSI) airport to the new Aerotropolis Station
- 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 services facilities, one in each of the tunnel sections at Claremont and Bringelly.

1.2. SBT Works scope

The construction methodology for the SBT Works entails:

- Utility works including removal, diversion, protection and connection to SBT worksites
- Local area works including provision of site accesses and some road upgrades
- Site establishment works including:
  - Fencing
  - Installation of environmental mitigation measures including erosion and sediment controls, noise barriers and acoustic enclosures
  - Clearing and grubbing of existing vegetation
  - Demolition of existing buildings and structures
  - Site levelling and drainage works
  - Establishment of internal access roads, hardstand areas and onsite parking
  - Erection of demountable buildings including offices and amenities
  - Other ancillary facilities including the erection of sheds, establishment of materials laydown and stockpiling areas and Tunnel Boring Machine (TBM) support works including spoil conveyors.
- Construction of station, shaft and dive excavations predominately completed by piling and excavators with rippers and hammers. Roadheaders will also be used at St Marys and Aerotropolis to complete the stub tunnels
- Construction of mainline tunnels using four TBMs, as follows:
  - Two earth pressure balance TBMs will be launched from Orchard Hills and tunnel north to St Marys a distance of approximately 4.3km, including traversing the Claremont Shaft. The TBMs will be retrieved from the St Mary's station box.

- Two double shield TBMs will be launched from the Airport Dive and tunnel south, traverse the Airport Terminal station box and shaft, where tunnelling will stop and the conveyor and backend equipment will be demobilised from the Airport Dive and re-established at the Airport Terminal Shaft. The TBMs will then recommence tunnelling, including traversing the Bringelly Shaft, and will be retrieved from the Aerotropolis station box (5.5km from the Airport Dive, with 2.5km of the southern tunnels located within NSW).
- Cross passages will be constructed using concrete saws and excavators with hammers.

It is anticipated that the shaft and station excavations will be completed in advance of TBM tunnel construction. The TBMs will be delivered via oversize heavy vehicles to Orchard Hills and the Airport Dive site and retrieved from St Marys and Aerotropolis, subject to relevant approvals.

The SBT Works do not include any surface works between the northern and southern tunnel sections, which are to be undertaken by another contractor.

Tunnelling, including station box, shaft and dive excavation and associated support activities will occur 24 hours a day, seven days a week. Utility and local area works that cannot be completed during standard daytime hours due to Road Occupancy Licence or utility authority requirements will also be undertaken out of hours.

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. The exception is the temporary precast facility, where the site will be decommissioned following the completion of segment manufacture and storage, and hydroseeded.

An overview of works at each SBT worksite is provided in Table 1.

Table 1: SBT Worksite overview

Jurisdiction	Worksite	Indicative scope of works
NSW	St Marys	• Demolition of existing industrial premises • Offices, amenities, car parking and access roads • Piling and station box excavation using rippers and rock hammers • Stub tunnel excavation using road headers • TBM retrieval.
NSW	Claremont Meadows	• Offices, amenities, car parking and access roads • Piling and services facility shaft excavation using ripper and rock hammers • Construction of part of the cast-in-situ permanent shaft • Cross passage construction support • Invert construction support (subject to Sydney Metro approval).
NSW	Orchard Hills	• Demolition of existing buildings and removal of septic tanks • Offices, amenities, car parking and access roads • Lansdowne Road temporary diversion and construction of the permanent road bridge • Piling and portal, station box and dive excavation using rippers and rock hammers • Construction of cast-in-situ permanent portal structure • TBM assembly, launch and tunnelling support works • Cross passage construction support.
On-Airport	Airport Portal Dive Structure	• Offices, amenities, car parking and access roads • Piling and portal excavation using rippers and rock hammers • Open cut dive excavation using rippers and rock hammers • Construction of cast-in-situ permanent dive structure • TBM assembly, launch and tunnelling support works • Cross passage construction support.

Jurisdiction	Worksite	Indicative scope of works
On-Airport	Airport Terminal and TBM shaft	• Offices, amenities car parking and access roads • Piling and station box and shaft excavation using rippers and rock hammers • TBM re-launch and tunnelling support works • Cross passage construction support.
On-Airport	Precast Facility	• Offices, amenities, car parking and access roads • Precast facility • Materials laydown • Segment storage • General storage.
On-Airport	Primary Spoil Receival	• Access road • TBM spoil conveyor set up • Earthworks in accordance with Sydney Metro Specifications.
NSW	Bringelly	• Offices, amenities, car parking and access roads • Piling and services facility shaft using rippers and rock hammers • Construction of part of the cast-in-situ permanent shaft • Cross passage construction support • Invert construction support (subject to Sydney Metro approval).
NSW	Aerotropolis	• Offices, amenities, car parking and access roads • Piling and station box excavation using rippers and rock hammers • Stub tunnel excavation using roadheaders • TBM retrieval

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

Figure 1: Overview of the Project

1.3. Scope of this Monitoring Program

This Surface Water Quality Monitoring Program (SWQMP or Program) forms Appendix B of the Soil and Water Management Sub-Plan (SWMP).

The scope of this Program is to describe how CPBG will monitor potential impacts to surface water during the SBT Works. Operational monitoring and operation measures do not fall within the scope of the construction phase and therefore are not included within the processes contained within this Program.

2. Purpose and objectives

2.1. Purpose

The purpose of the Program is to describe how CPBG will monitor surface water quality during SBT Works.

The Program will be implemented to monitor the effectiveness of mitigation measures applied during the SBT Works. Monitoring of surface water will be undertaken to identify potential impacts and ensure an appropriate management regime can be implemented to address those impacts and manage local surface water quality.

This Program provides details of the surface water monitoring network, frequency of monitoring, and test parameters. This Program supplements the SWMP, which is an appendix of the Construction Environmental Management Plan (CEMP).

This Program is based on baseline studies developed for the EIS (NSW Government, 2020).

2.2. Objectives

The key objective of this Program is to demonstrate compliance with:

- State Significant Infrastructure (SSI) 10051 Planning Approval (dated 23 July 2021)
- Sydney Metro Western Sydney Airport – CSSI Staging Report (Staging Report)
- Sydney Metro Construction Environmental Management Framework (CEMF)
- EIS and the Submissions Report, including the Revised Environmental Mitigation Measures (REMMs)
- Environment Protection Licence (EPL) (21672)
- Contractual requirements, including the SBT Design and Construction Deed and General and Particular Specifications
- Applicable legislation.

2.3. Consultation

Reflecting the requirements of Conditions A6 and C13(b), this SWQMP will be prepared in consultation with Department of Planning and Environment (DPE) Water, DPI Fisheries, Environment Protection Authority, Penrith City Council and City of Liverpool Council. A detailed consultation report, including matters raised by stakeholders and CPBG responses will be provided in Annexure D of the SWMP.

In accordance with the Staging Report, this SWQMP will be updated to address any relevant comments prior to submission to the Environmental Representative (ER) for endorsement. The submission of this Program to the ER for endorsement will occur no later than one month before the commencement of the Bulk Excavation and Tunnelling Works.

Construction will not commence until this SWQMP has been endorsed by the ER. This Program, as endorsed by the ER, including any minor amendments approved by the ER, will be implemented for the duration of the SBT Works.

2.4. Compliance

The Conditions and REMMs relevant to this Program are detailed in Table 2.

Table 2: Conditions and REMMs of relevance to this Program

<table>
<tr><th>ID</th><th>Type</th><th>Detail</th><th>How addressed</th></tr>
<tr><td colspan="4">Conditions of Approval</td></tr>
<tr><td>C13(b)</td><td>CoA</td><td>The following Construction Monitoring Programs must be prepared in consultation with the relevant government agencies (as required by Condition A6) identified for each to compare actual performance of construction of the CSSI against the performance predicted in the documents listed in Condition A1 or in the CEMP. Where a government agency(ies) request(s) is not included, the Proponent must provide the Planning Secretary / ER (whichever is applicable) justification as to why.
<table>
<tr><th>No</th><th>Required Construction Monitoring Programs</th><th>Relevant government agencies to be consulted for each Construction Monitoring Program</th></tr>
<tr><td>(b)</td><td>Surface water quality</td><td>DPIE Water, DPI Fisheries, and Relevant Councils</td></tr>
</table></td><td>Refer to Section 2.3 for consultation details.</td></tr>
<tr><td>C14</td><td>CoA</td><td>Each Construction Monitoring Program must provide:
(a) details of baseline data available including the period of baseline monitoring;
(b) details of baseline data to be obtained and when;
(c) details of all monitoring of the project to be undertaken;
(d) the parameters of the project to be monitored;
(e) the frequency of monitoring to be undertaken;
(f) the location of monitoring;
(g) the reporting of monitoring results and analysis results against relevant criteria;
(h) details of the methods that will be used to analyse the monitoring data;
(i) procedures to identify and implement additional mitigation measures where the results of the monitoring indicated unacceptable project impacts;
(j) a consideration of SMART principles;
(k) any consultation to be undertaken in relation to the monitoring programs; and
(l) any specific requirements as required by Conditions C15 to C16.</td><td>This document</td></tr>
<tr><td>C17</td><td>CoA</td><td>With the exception of any Construction Monitoring Programs expressly nominated by the Planning Secretary to be endorsed by the ER, all Construction Monitoring Programs must be submitted to the Planning Secretary for approval.</td><td>Refer to Section 2.3 for consultation details.</td></tr>
</table>

ID	Type	Detail	How addressed
C18	CoA	The Construction Monitoring Programs not requiring the Planning Secretary's approval must obtain the endorsement of the ER as being in accordance with the conditions of approval and all undertakings made in the documents listed in Condition A1. Any of these Construction Monitoring Programs must be submitted to the ER for endorsement at least one (1) month before the commencement of construction or where construction is staged no later than one (1) month before the commencement of that stage.	Refer to Section 2.3 for consultation and approvals process.
C19	CoA	Any of the Construction Monitoring Programs which require Planning Secretary approval must be endorsed by the ER and then submitted to the Planning Secretary for approval at least one (1) month before the commencement of construction or where construction is staged no later than one (1) month before the commencement of that stage.	Refer to Section 2.3 for consultation and approvals process.
C20	CoA	Unless otherwise agreed with the Planning Secretary, construction must not commence until the Planning Secretary has approved, or the ER has endorsed (whichever is applicable), all of the required Construction Monitoring Programs and all relevant baseline data for the specific construction activity has been collected.	Refer to Section 2.3 for consultation and approvals process.
C21	CoA	The Construction Monitoring Programs, as approved by the Planning Secretary or the ER has endorsed (whichever is applicable), including any minor amendments approved by the ER, must be implemented for the duration of construction and for any longer period set out in the monitoring program or specified by the Planning Secretary or the ER (whichever is applicable), whichever is the greater.	Refer to Section 2.3 for consultation and approvals process.
C22	CoA	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.	Section 5.5
REMMs			
WQ1	REMM	A surface water quality monitoring program would be implemented to monitor water quality during construction. The program would be developed in consultation with (as relevant) Western Sydney Airport, NSW Environment Protection Authority, relevant sections of Department of Planning, Industry and Environment and relevant local councils. The program would consider monitoring being undertaken as part of other infrastructure projects such as the M12 Motorway and Western Sydney International. On-airport, the water quality monitoring program would ensure that works meet the requirements under Schedule 2 of the Airports (Environment Protection) Regulations 1997 The program would monitor all construction discharge locations.	This document. Refer to Section 2.3 for consultation and approvals process. Refer to Section 3.2 for monitoring locations.

3. Surface water monitoring

3.1. Baseline monitoring

3.1.1. Overview

Baseline surface water monitoring in waterways surrounding the Project has been undertaken over the past 20 years as reported in the EIS. This includes results from the following:

- Western Sydney Airport – Surface Water Quality Assessment (GHD, 2016)
- Environmental Field Survey of Commonwealth Land at Badgerys Creek (SMEC, 2014)
- Geology, Soils and Water Technical Paper – Proposal for a Second Sydney Airport at Badgerys Creek or Holsworthy Military Area (PPK, 1997).

In addition to the above data sets, water quality monitoring was also conducted for the M12 Motorway project (GHD, 2020) at a series of sites in Cosgroves, Badgerys, South, Kemps and Ropes Creeks.

Monitoring of water quality within the watercourses surrounding the WSA has been undertaken by Cardno (2021) as required by the WSA Soil and Water Construction Environmental Management Plan (SWCEMP) and builds on the previous water quality monitoring initiated in 2015 by GHD (GHD, 2016).

3.1.2. Monitoring network

3.1.2.1. Available data

Baseline water quality monitoring locations were located in various local waterways both upstream and downstream of the SBT Works alignment as shown in Figure 2 to Figure 5 and listed in Table 3.

Note that numerous monitoring locations shown on Figure 2 to Figure 5 are associated with other projects and are not relevant to the monitoring program for the SBT Works. Those sites are omitted from Table 3. No data has historically been collected from downstream of the SBT Works area at St Marys.

Table 3: Baseline surface water monitoring locations relevant to the SBT Works

Position	Sample ID	Sample Location	Source	Refer to Figure
Upstream of Project alignment (North: Orchard Hills to St Marys)	SREC	South Creek	GHD, 2016	Figure 2
	S1	South Creek	PPK, 1997	Figure 3
	S3	South Creek	PPK, 1997	Figure 3
Upstream of Project alignment (South: WSA to Aerotropolis Station)	BCUS	Badgerys Creek	GHD, 2016	Figure 3
	B1	Badgerys Creek	PPK, 1997 and SMEC, 2014	Figure 3
	TCUS	Thompsons Creek	GHD, 2016	Figure 3
	L9	Badgerys Creek	GHD, 2016	Figure 3
	D/S Badgerys	Badgerys Creek	Cardno, 2021	Figure 5
	U/S Airport 2	Badgerys Creek	Cardno, 2021	Figure 5
	BCMC	Badgerys Creek	GHD, 2016	Figure 3

Position	Sample ID	Sample Location	Source	Refer to Figure
Downstream of Project alignment (South: WSA to Aerotropolis Station)	BCDS	Badgerys Creek	GHD, 2016	Figure 3
	B2	Badgerys Creek	PPK, 1997 and SMEC, 2014	Figure 3
	B3	Badgerys Creek	PPK, 1997 and SMEC, 2014	Figure 3
	T1	Thompsons Creek	PPK, 1997 and SMEC, 2014	Figure 3
	L5	Oaky Creek	GHD, 2016	Figure 3
	C3	Cosgroves Creek	PPK, 1997 and SMEC, 2014	Figure 3
	L1	Badgerys Creek	GHD, 2016	Figure 3
	L2	Badgerys Creek	GHD, 2016	Figure 3
	L3	Badgerys Creek	GHD, 2016	Figure 3
	L4	Badgerys Creek	GHD, 2016	Figure 3
	BADUS	Badgerys Creek	GHD, 2020	Figure 4
	D/S Basin 3	Badgerys Creek	Cardno, 2021	Figure 5
	D/S Basin 2	Badgerys Creek	Cardno, 2021	Figure 5

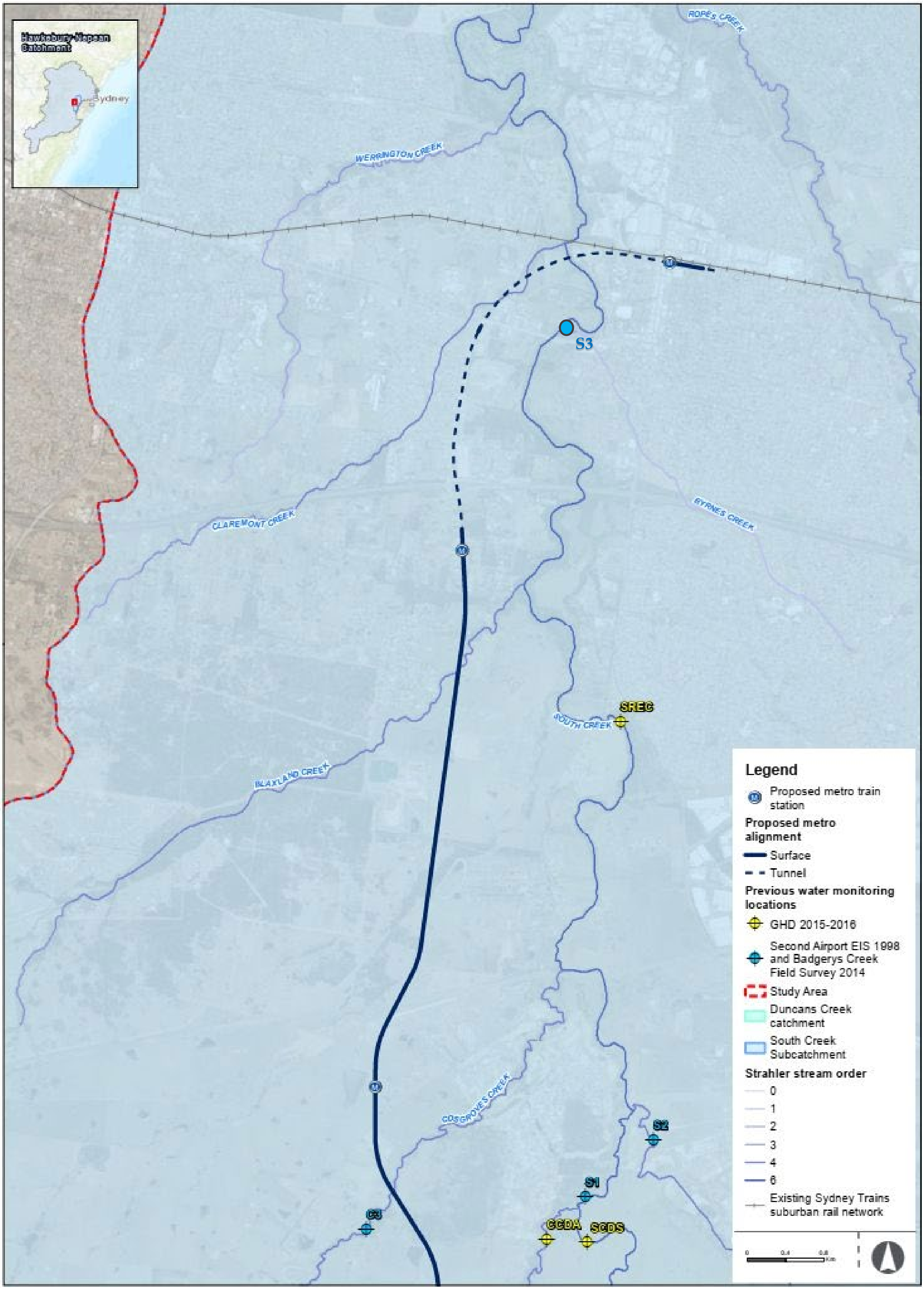

Figure 2: Project alignment (north) showing baseline monitoring locations from previous studies and reports

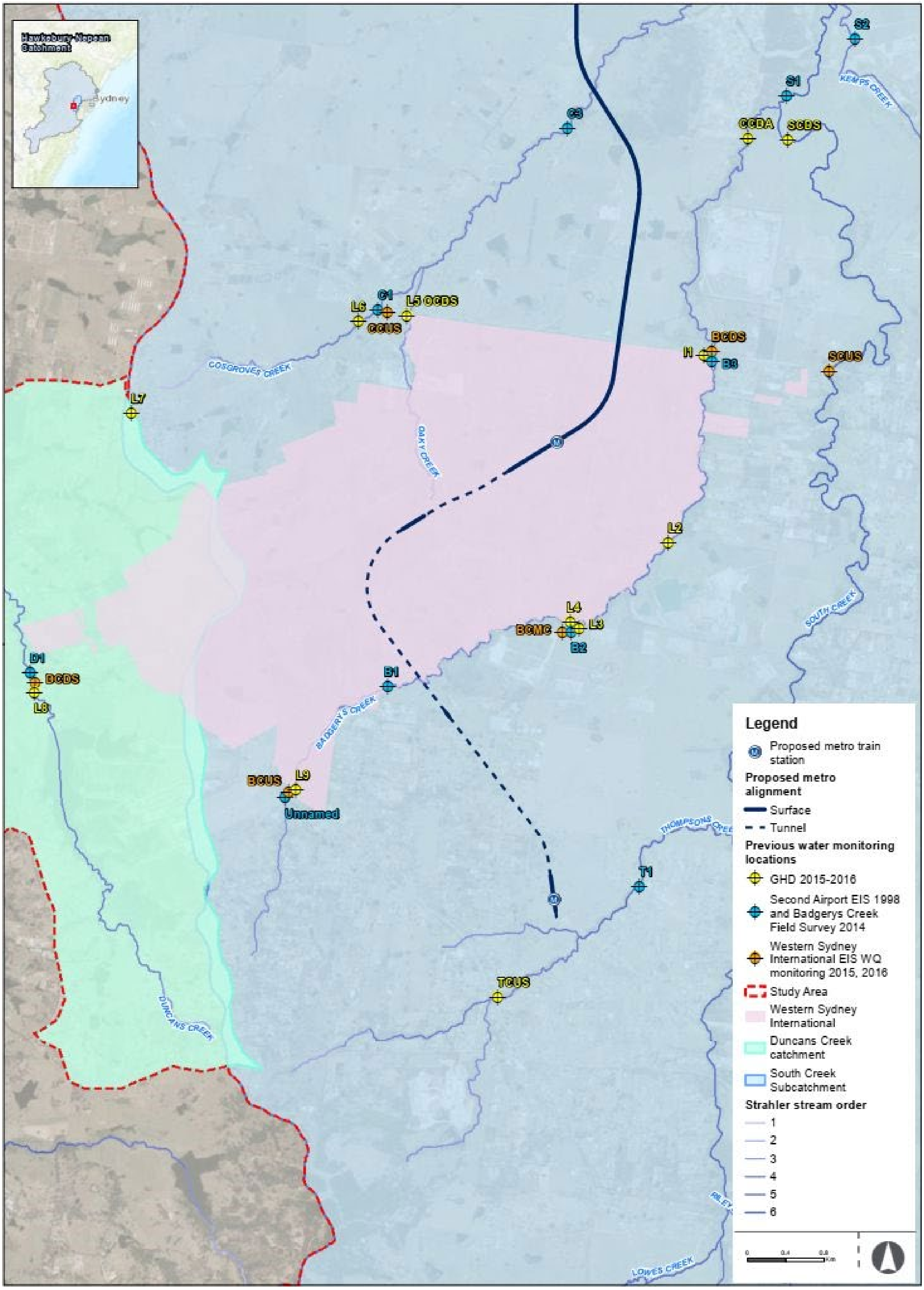

Figure 3: Project alignment (south) showing baseline monitoring locations from previous studies and reports

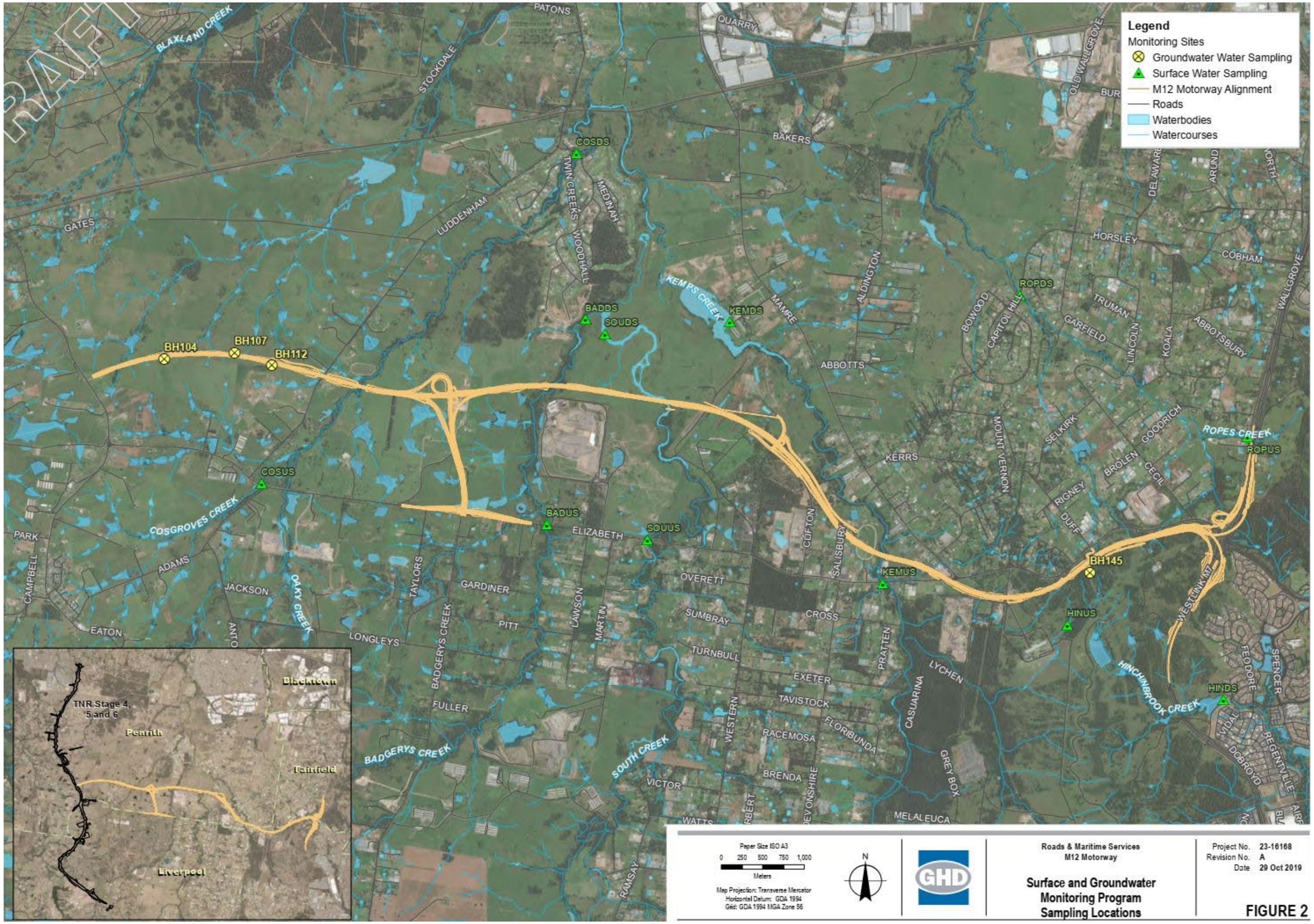

Figure 4: M12 Motorway water monitoring locations (GHD, 2020)

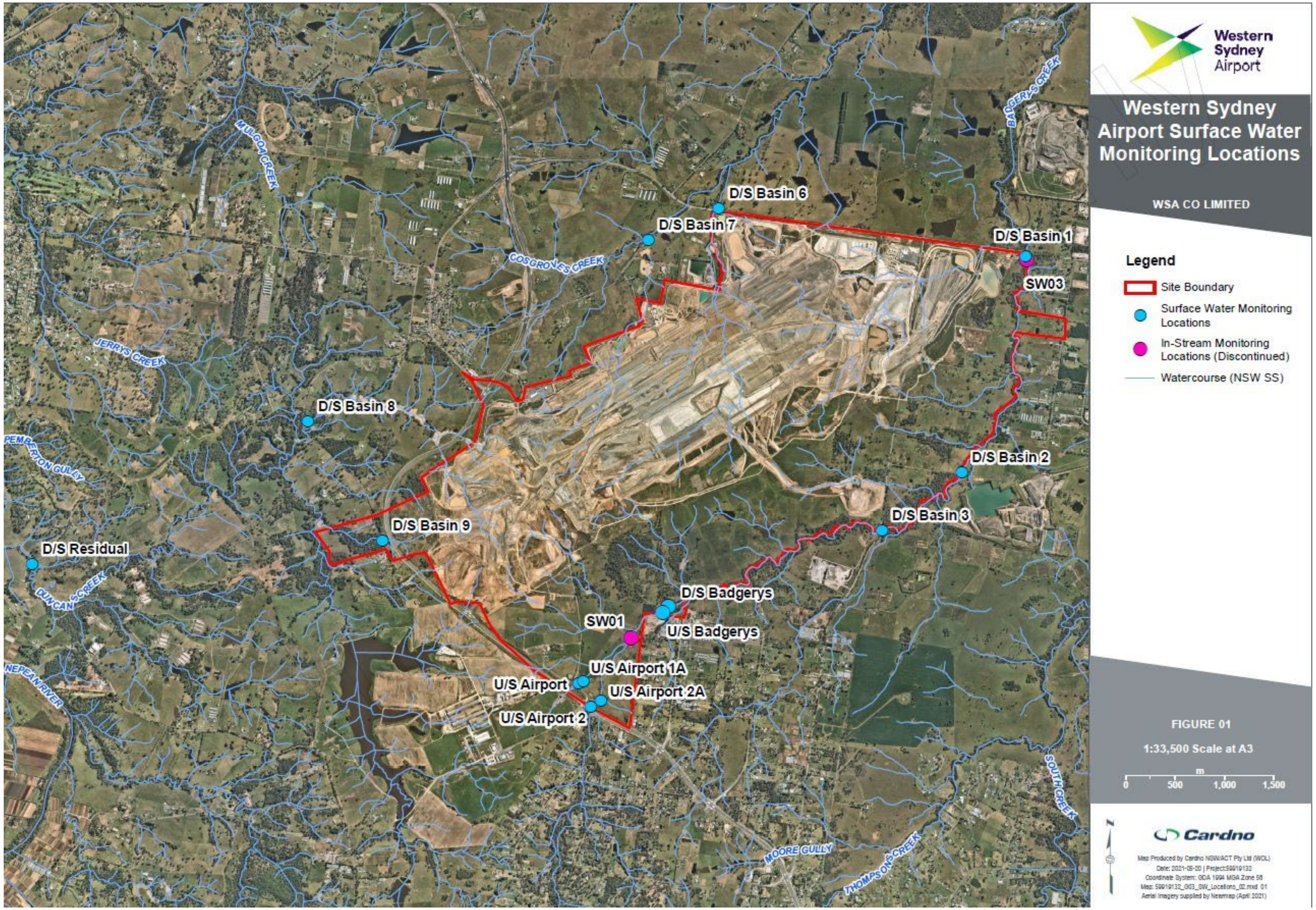

Figure 5: WSA surface water monitoring sites (Cardno, 2021)

3.1.2.2. Selected sites for baseline analysis

As noted in Table 3, there are numerous locations that have been subject to water quality monitoring over the past few decades. Table 4 details the historic sites selected to inform the baseline water quality data in South Creek, Badgerys Creek and Thompsons Creek. These have been selected based on the proximity of the sites to the SBT Works, and data quality/quantity.

Refer to Section 3.2.3 for details of the SBT Works monitoring locations.

Table 4: Selected upstream and downstream surface water monitoring locations for baseline analysis.

Position	Sample ID	Sample Location	Source	Refer to Figure
Upstream of Project alignment (North: Orchard Hills to St Marys)	S1	South Creek	PPK, 1997 and SMEC, 2014	Figure 3
Upstream of Project alignment (North: Orchard Hills to St Marys)	S2	South Creek	PPK, 1997 and SMEC, 2014	Figure 3
Upstream of Project alignment (South: WSA to Aerotropolis Station)	D/S Badgerys	Badgerys Creek	Cardno, 2021	Figure 5
Downstream of Project alignment (South: WSA to Aerotropolis Station)	D/S Basin 3	Badgerys Creek	Cardno, 2021	Figure 5
	T1	Thompsons Creek	PPK, 1997 and SMEC, 2014	Figure 3

3.1.3. Surface water quality

South Creek Catchment in Western Sydney is one of the most heavily degraded catchments in Australia (Hawkesbury-Nepean CMA, 2007). The catchment has suffered from high pollution loads, increased impervious surfaces from urbanisation, and long-term clearing of vegetation resulting in a rise of saline groundwater into streams and increased sediment and pollutant runoff (Boon, 2017).

Monitoring of water quality within the watercourses surrounding the WSA has been undertaken by Cardno (2021) as required by the WSA Soil and Water Construction Environmental Management Plan (SWCEMP) and builds on the previous water quality monitoring initiated in 2015 by GHD (GHD, 2016). Water quality parameters that have been tested include:

- Total recoverable hydrocarbons (TRH)
- Polycyclic aromatic hydrocarbons (PAHs) and trace phenols
- Volatile organic compounds (VOCs)
- Benzene, toluene, ethylbenzene, xylene and naphthalene (BTEXN)
- Metals (As, Cd, Cr, Cu, Pb, Hg, Ni and Zn)
- Trace organochlorine and organophosphorus pesticides
- Nutrients (nitrate, nitrite, ammonia, total Kjeldahl nitrogen, total phosphorous, reactive phosphorous, total nitrogen)
- Total suspended solids (TSS)
- Turbidity
- Thermotolerant coliforms and Chloropyhll-a).

As noted above, the baseline surface water quality dataset is derived from a range of sampling programs. As such, there is some variance in the analytes that were sampled and tested.

Table 5 provides a summary of the baseline water quality data for the five historic monitoring sites, with detailed tables included in Annexure A where such data are available. Interpretation of the baseline surface water monitoring data is summarised in Table 6.

Table 5: Baseline surface water quality averages (from PPK, 1997, SMEC, 2014, GHD, 2016 and Cardno, 2021)

Parameter	ANZG (2018) and ANZECC (2000)	Historic monitoring location				
		S1	S3	D/S Badgerys	D/S Basin 3	T1
DO % sat	85-110	83 to 105	39 to 79	53.99	60.44	15 to 50
Conductivity (µs/cm)	125-2,200	nt	<500 to 3,200	1075.92	7857.92	nt
pH	6.5-8.0	7 to 7.2	6.9 to 7.4	7.74	7.5	6.4 to 7.3
Turbidity (NTU)	6-50	15 to 65	12 to 40	41.08	49.16	4.9 to 17
TSS (mg/L)	3-25 (see note 2)	9 to 56	4 to 14	44.7	42.12	5 to 31
TN (mg/L)	0.5	0.49 to 1.6	0.8 to 1.52	3.46	3.6	0.02 to 1.14
TP (mg/L)	0.05	0.01 to 0.14	0.05 to 0.5	0.52	0.6	0.01 to 0.07
Arsenic	0.013	nt	nt	0.0017	0.0027	nt
Cadmium	0.0002	nt	nt	<0.0002	0.0002	nt
Chromium (VI)	0.0033 (III) and 0.001 (VI)	1.7	nt	0.0025	0.004	nt
Copper	0.0014	3.6	nt	0.0076	0.0083	nt
Lead	0.0034	1.61	nt	0.0024	0.0032	nt
Mercury	0.0006	nt	nt	<0.0001	<0.0001	nt
Nickel	0.011	nt	nt	0.0026	0.0035	nt
Zinc	0.008	9.1	nt	0.0125	0.0147	nt

* 95th percentile species protection.

Table 6: Summary of interpretation of baseline water quality conditions in the Project area

Waterway	Baseline data obtained	Description of water quality
South Creek	Samples collected at S1 and S3 (PPK, 1997).	Generally elevated concentrations of nutrients (nitrogen and phosphorous) and depleted dissolved oxygen. Heavy metals exceed guideline values (Chromium VI, copper and zinc). Turbidity exceeds guideline levels following heavy rainfall. Electrical conductivity (salinity) is above guideline levels during dry weather when the dilution effect of additional inflows is absent.

Waterway	Baseline data obtained	Description of water quality
Badgerys Creek	Samples collected at D/S Badgerys and D/S Basin 3 by GHD (2016) and Cardno (2021).	Heavy metals all lower than guideline levels. Generally elevated concentrations of nutrients (nitrogen and phosphorous) and depleted dissolved oxygen. Turbidity exceeds guideline levels following heavy rainfall. Electrical conductivity (salinity) is above guideline levels, especially during dry weather when the dilution effect of additional inflows is absent.
Thompsons Creek	Samples collected at T1 (PPK, 1997 and SMEC, 2014).	Depleted dissolved oxygen. pH occasionally outside guideline values.

3.2. Surface water quality construction monitoring

3.2.1. Overview

The discharge of sediments and pollutants during the SBT Works is identified as a potential impact on surface water within the disturbed catchments and waterways of South Creek, Badgerys Creek and Thompsons Creek. CPBG will engage a soil conservation specialist to provide design input on erosion and sediment control. In addition, Water Treatment Plants (WTPs) will be used to treat groundwater inflows into tunnels and station boxes prior to release.

Table 8 contains the parameters to be tested as part of this Program. Site Specific Trigger Values (SSTVs) are identified in Table 9 and will be used to assess potential impacts on waterways.

Variation in physio-chemical parameters (Table 9) provides an indication of a change to overall water quality triggering the assigned performance criteria and further impact assessment.

Groundwater inflows intercepted during tunnelling and station boxing will be discharged via WTPs. The EPL (on receipt) may authorise discharge of water from specific locations or premises and establish criteria that differ from those given in this Program. In such circumstances the EPL, and any conditions and criteria of that EPL, take precedence and this Program will be revised as necessary.

3.2.2. Rainfall monitoring

To provide data to assess water quality trends, rainfall will be monitored during the construction phase via rain gauges at CPBG compounds in the north and south, which will be checked on each workday or automated using an electronic weather station.

3.2.3. Monitoring locations

Surface water quality monitoring will be carried out during construction at five sites, listed in Table 7 and shown in Figure 6 and Figure 7. The monitoring program will commence prior to any ground disturbance. Background monitoring from previous studies (see Section 3.1) comprises the baseline monitoring of this program. Construction phase monitoring will commence following ER endorsement of this Program.

The monitoring allows for the assessment of trends in water quality, including natural variations, and will enable assessment of any potential impacts during construction. The surface water quality monitoring locations were also monitored during the baseline monitoring period that informed the EIS (as discussed in Section 3.1).

Monitoring of discharge from the WTPs is discussed in the Groundwater Monitoring Program (GWMP).

Table 7: Construction phase surface water monitoring program

Sample ID	Equivalent historic monitoring location(s) (see note 1)	Sample location	Analysis suite	Sampling frequency
SBT1	N/A	South Creek, Christie St bridge, St Marys	Physio-chemical parameters and heavy metals (see note 2)	Quarterly/ Wet weather (see note 3)
SBT2	S1 and S3	South Creek, end of Samuel Marsden Rd, Orchard Hills	Physio-chemical parameters (see note 2)	Quarterly / Wet weather (see note 3)
SBT3	D/S Basin 3	Badgerys Creek, Badgerys Creek Road crossing, Bringelly	Physio-chemical parameters and heavy metals (see note 2)	Quarterly / Wet weather (see note 3)
SBT4	D/S Badgerys	Badgerys Creek near Mersey Road, Bringelly	Physio-chemical parameters (see note 2)	Quarterly / Wet weather (see note 3)
SBT5	T1	Thompsons Creek, The Retreat crossing, Bringelly	Physio-chemical parameters and heavy metals (see note 2)	Quarterly / Wet weather (see note 3)

Notes:

1. Sample location ID's from previous studies. Included to allow for cross-referencing.
2. Physico-chemical (field) parameter analysis and heavy metals as detailed in Table 7
3. Quarterly wet weather monitoring (at least once every 3 months following 20mm of continuous rainfall – see Sampling frequency in Section 3.2.4).

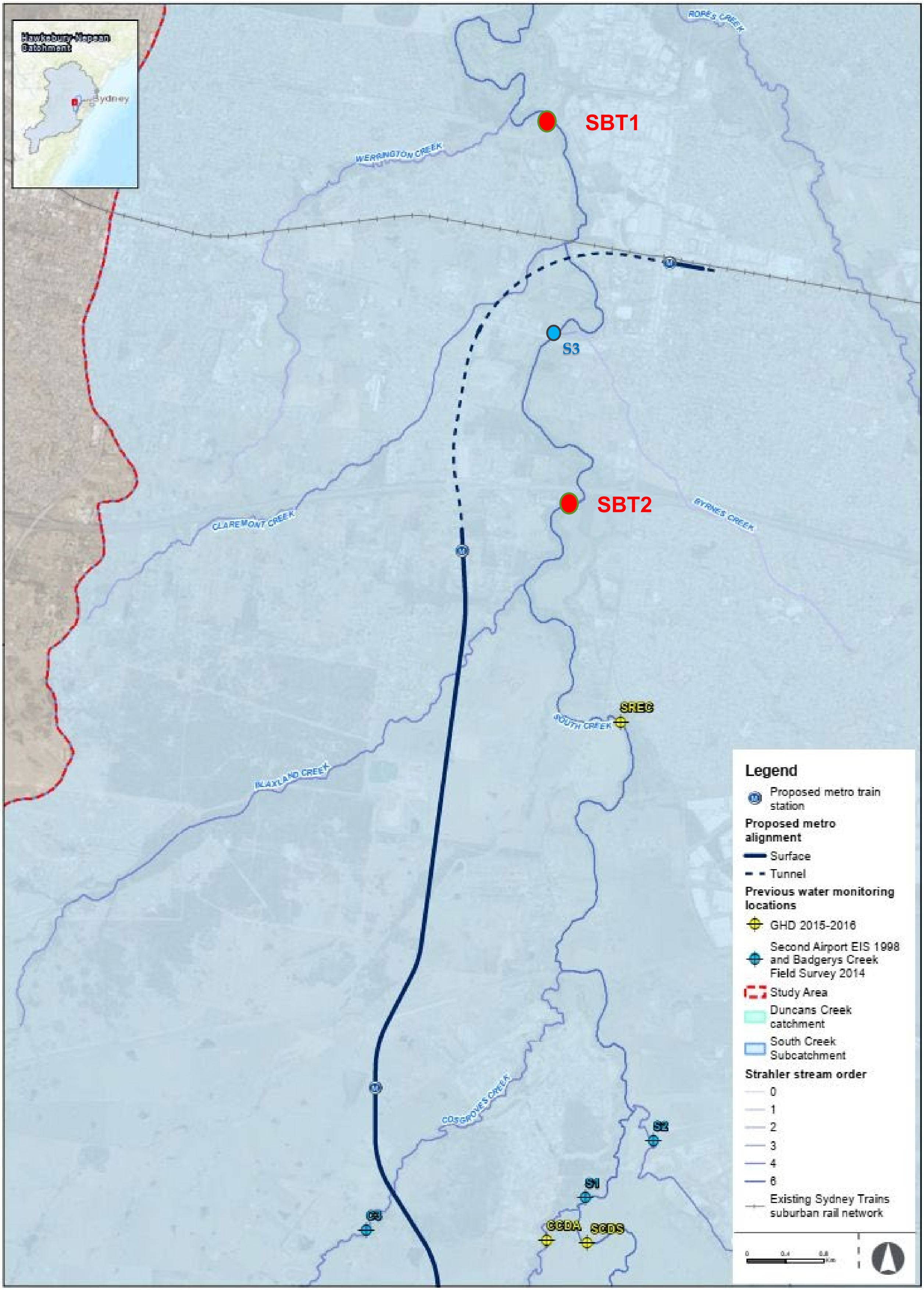

Figure 6: Project alignment (north) showing SBT Works monitoring locations.

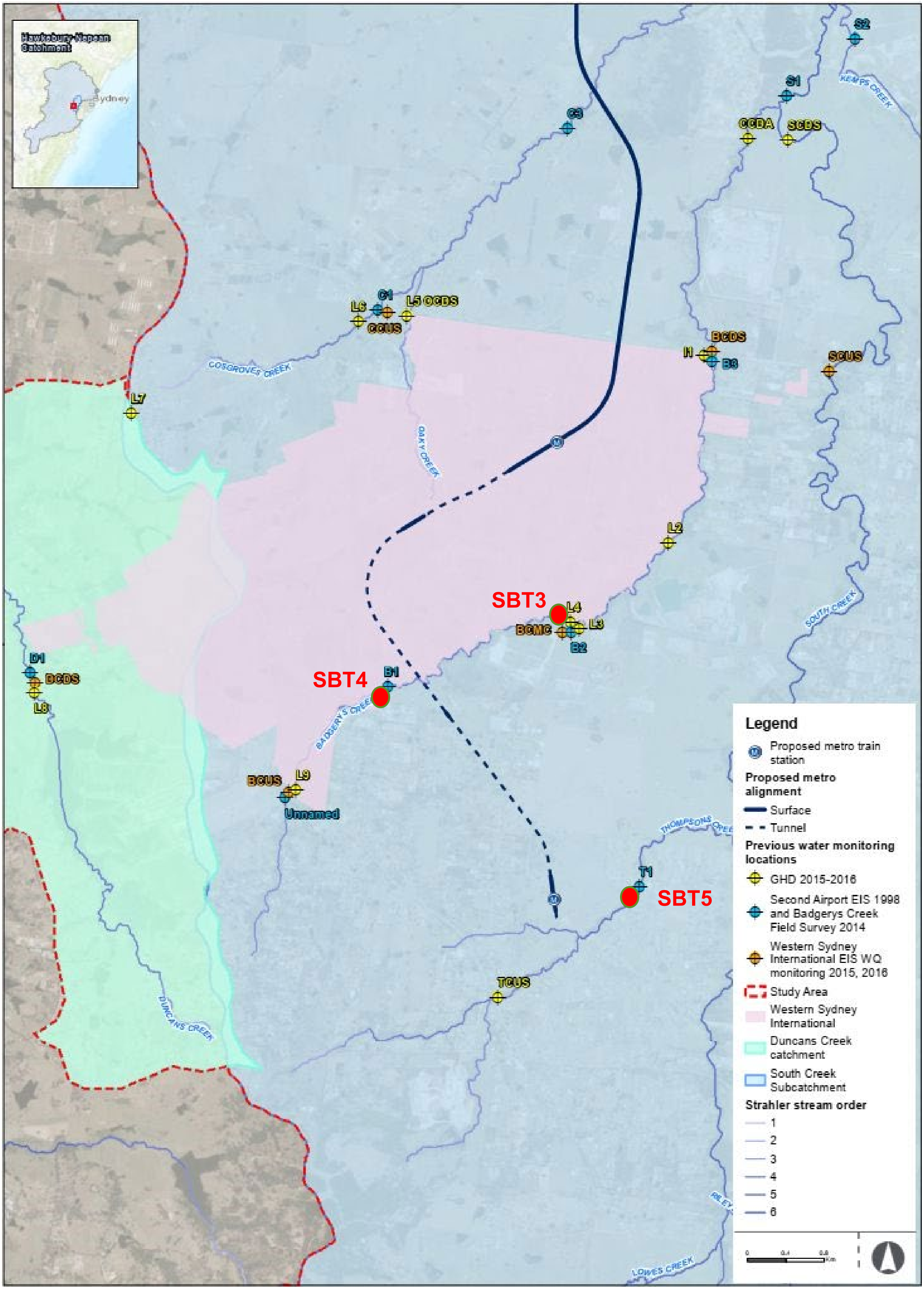

Figure 7: Project alignment (south) showing SBT Works monitoring locations.

3.2.4. Sampling frequency

During the SBT Works, water quality sampling will be undertaken quarterly.

Wet weather monitoring will be carried out:

- A minimum of once per 3 months where rainfall does not exceed 25mm, and
- 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.

For safety reasons, sampling will not be undertaken during peak storm-flows. Sampling will be completed when flows are reasonably constant and monitoring points can be safely accessed. Monitoring locations will be selected where possible to enable a safe monitoring location during all weather conditions.

This Program will continue for the duration of the SBT Works.

3.2.5. Surface water quality parameters

Table 8 details the analytes that will be monitored during the SBT Works, at the locations listed in Table 7 and shown in Figure 6 and Figure 7.

Table 8 Surface water quality monitoring parameters

Category	Measured	Parameters
Physio-chemical parameters	In-field using a calibrated multi parameter probe.	• Temperature (˚C) • Dissolved Oxygen (% saturation) • Electrical Conductivity (µS/cm) • Reduction-Oxidation Potential (Redox)(mV) • pH • Total suspended solids (TSS) • Turbidity (NTU) • Visible oil and grease
Metals	Laboratory testing	• Aluminium • Arsenic (III and V) • Cadmium • Cobalt • Chromium (III and VI) • Copper • Lead • Manganese • Mercury • Nickel • Vanadium • Zinc
Organochlorine Pesticides	Laboratory testing	• Endosulphan • Methoxychlor
Total Petroleum Hydrocarbons	Laboratory testing	• TPH C10-C36 Fraction • TPH C6-C9 Fraction

Surface water quality analysis results will be assessed and compared to baseline conditions, rainfall records, upstream monitoring results, and the performance criteria described below.

3.2.6. Performance criteria

3.2.6.1. Site specific trigger values

Baseline monitoring shows that some surface water quality parameters exceed the default ANZECC (2000a) water quality trigger values for slightly to moderately disturbed ecosystems.

This is not unexpected given the highly disturbed catchment area and receiving waterways surrounding the project.

Location specific performance criteria (SSTV) have been developed for downstream (impact) surface water monitoring locations (see Table 9).

SSTV were developed for appropriate parameters using baseline monitoring data and ANZECC (2000a) guideline criteria for slightly to moderately disturbed ecosystems (generally protecting 95% of species) (Table 9).

Table 9 Site specific trigger values (SSTV)

Parameter	Units	ANZECC guidelines	SBT1	SBT2 (see note 1)	SBT3	SBT4 (see note 1)	SBT5
Location			**South Creek downstream**	**South Creek upstream**	**Badgerys Creek downstream**	**Badgerys Creek upstream**	**Thompsons Creek**
pH	pH	6.5-8.0	6.5-8.0	N/A	6.5-8.0	N/A	6.5-8.0
Electrical Conductivity	µS /cm	125-2,200	2,200	N/A	2,200	N/A	500
Turbidity	NTU	6-50	40	N/A	49	N/A	17
TSS	mg/L	3-25 (see note 2)	25	N/A	42	N/A	9
DO	% sat	85-110	40-110	N/A	60-110	N/A	50-110
Arsenic (III)	mg/L	0.013	TBC	N/A	0.013	N/A	TBC
Arsenic (V)	mg/L	0.024	TBC	N/A	TBC	N/A	TBC
Cadmium	mg/L	0.0002	TBC	N/A	0.0002	N/A	TBC
Cobalt	mg/L	0.0014	TBC	N/A	TBC	N/A	TBC
Chromium	mg/L	0.0033 (III) and 0.001 (VI)	TBC	N/A	0.0033 (III) and 0.001 (VI)	N/A	TBC
Copper	mg/L	0.0014	TBC	N/A	0.0014	N/A	TBC
Lead	mg/L	0.0034	TBC	N/A	0.0034	N/A	TBC
Manganese	mg/L	1.900 1.900.005	TBC	N/A	TBC	N/A	TBC
Mercury	mg/L	0.0006	TBC	N/A	0.0006	N/A	TBC
Nickel	mg/L	0.011	TBC	N/A	0.011	N/A	TBC

Parameter	Units	ANZECC guidelines	SBT1	SBT2 (see note 1)	SBT3	SBT4 (see note 1)	SBT5
Location			**South Creek downstream**	**South Creek upstream**	**Badgerys Creek downstream**	**Badgerys Creek upstream**	**Thompsons Creek**
Vanadium		0.006	TBC	N/A	TBC	N/A	TBC
Zinc	mg/L	0.008	TBC	N/A	0.008	N/A	TBC
Endosulphan	mg/L	0.0002	TBC	N/A	TBC	N/A	TBC
Methoxychlor	mg/L	Insufficient Data	TBC	N/A	TBC	N/A	TBC
TPH C6-C9 Fraction	mg/L	0.2 (see Note 4)	TBC	N/A	TBC	N/A	TBC
TPH C10-C36 Fraction	mg/L	0.16 (see Note 5)	TBC	N/A	TBC	N/A	TBC

Notes:

1. SBT2 and SBT4 do not have SSTV, so are all marked N/A (not applicable). SBT2 and SBT4 are upstream of the SBT Works and will be monitored to allow for upstream versus downstream comparisons. In the event a SSTV is triggered at SBT1 or SBT3, it can be compared against the corresponding upstream location to determine if the trigger is potentially caused by the Project.
2. TSS is conservatively assumed to be at a ratio of 1:2 with Turbidity.
3. SSTVs marked "TBC" will be determined by a rolling mean following the first three rounds of sampling and testing. Refer to Section 3.2.6.2 for details.
4. TPH C6-C9 Fraction – showing ANZECC trigger value for p-xylene as this is the lowest value out of the C6-C9 fraction.
5. TPH C10-C36 Fraction – showing ANZECC trigger value for Naphthalene as this is the only listed value out of the C10-C36 fraction.

The SSTVs provide an easily identifiable indication of a potential change in water quality. 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.

In the event that any of the above triggers are observed, a review will be initiated immediately to determine the significance of the exceedance(s) and possible causes. The review will assess the baseline data for the relevant waterway, recent rainfall records, other activities within the catchment and recent activities or recorded erosion/sediment control incidents occurring in the catchment.

If the exceedance is determined to be attributable to SBT Works, the event will be treated as an environmental incident and managed in accordance with the requirements of Section 7.10 of the CEMP. Corrective and preventative actions will be identified and implemented as part of that process.

3.2.6.2. Rolling mean SSTV

As noted in Table 8, background data for heavy metals have not been collected in:

- South Creek downstream of the St Marys worksites, or
- Thompsons Creek.

As such, no SSTV can be developed for these monitoring locations at the time of preparing this Program.

The SSTV will be developed for heavy metals for SBT1 and SBT5 based on a rolling mean. Once at least three samples have been collected and tested, the average concentrations of heavy metals will be established as the SSTV based on those data. As each round of sampling and testing occurs, the SSTV will be updated according to the average of the expanded dataset. Initially, during the first three rounds of sampling, the default ANZECC values would be adopted as the interim SSTVs (where available).

In analysing these data, the SSTV responses would be initiated as per the instructions in Section 3.2.6.1.

3.2.6.3. Upstream vs downstream comparisons

The following upstream/downstream comparisons will apply after each round of sampling and testing:

- SBT1 vs SBT2 (South Creek)
- SBT3 vs SBT4 (Badgerys Creek).

4. Monitoring methodology / Sampling protocol

4.1. Sampling collection

Grab samples will be collected manually from the sampling locations identified in Table 7, Figure 6 and Figure 7. The volume of sample collected will be sufficient for the required physio-chemical (field) parameter analysis using a multi-probe water quality meter(s).

4.2. Field measures

Field physio-chemical parameters including EC, pH, DO, TDS, ORP, temperature, and turbidity will be measured at each sampling location using a fully calibrated multi-probe water quality meter(s) or provided for laboratory analysis. Other observations including odour and colour may also be recorded.

The multi-probe field water quality meter(s) will be calibrated against known standards, as supplied by the manufacturer, at the start and completion of each day of water quality sampling.

4.3. Recording of field results

Results for each monitoring location will be recorded on appropriate field sheets (hard copy or digital) using unique sampling identification nomenclature consisting of the sample date, location, and sampler details.

4.4. Decontamination

Sampling equipment will be cleaned (decontaminated) between each sample. Where a sample site shows evidence of contamination (i.e. there is an algal bloom, or the site smells strongly of hydrocarbons, sewage or something else) equipment will need to be cleaned thoroughly. In addition, equipment will need to be cleaned periodically to prevent a build-up of dirt.

The following method will be followed:

- Rinse the equipment in tap water
- Clean with De-Con 90 (a phosphate free detergent), or equivalent
- Rinse again with tap water
- Rinse three times with de-ionised water
- Allow to dry.

De-ionised and tap water will be available for washing equipment in the field, if required.

4.5. Quality Assurance and documentation

Any sample to be sent to a laboratory will be subject to quality assurance protocols.

Quality assurance and control protocols during sampling and recording of physio-chemical (field) parameters will be undertaken (each sampling event) in accordance with ANZECC/ARMCANZ (2000b) to ensure the integrity of the dataset.

As part of sampling the following will be undertaken:

- Rinsate blanks (one per sampling event only)
- Blind duplicates (at a rate not less than 20% of total samples)
- Split duplicates (at a rate not less than 20% of total samples).

Samples are to be transported to a NATA-accredited laboratory under documented chain-of custody protocols.

Field results will be checked for accuracy before leaving the site and errors or discrepancies will be cross-checked, and further investigation initiated if required.

Monitoring and calibration records will be maintained in accordance with the appropriate standard.

5. Compliance management

5.1. Roles, responsibility, and training

The CPBG organisational structure and overall roles and responsibilities are outlined in Section 4 of the CEMP. Specific responsibilities for the implementation of environmental controls are detailed in Section 8 of the SWMP.

All employees, contractors and utility staff working on site will undergo site induction and targeted training relating to surface water management issues, detailed in the SWMP and CEMP.

Further details regarding staff induction and training are outlined in Section 7.8 of the CEMP.

5.2. Monitoring and inspection

This Program details the monitoring requirements for surface water. Additional soil and surface water inspection requirements (including weekly site inspections) are detailed in the SWMP (Element 2: Monitoring and Reporting).

In accordance with Section 4 of the CEMP, the Environment Manager will be responsible for ensuring monitoring activities are undertaken.

Additional requirements and responsibilities in relation to inspections are documented in Section 7.4.2 of the CEMP.

5.3. Data analysis and management response

Monitoring results for surface water quality will be compared against SSTVs (Table 9), and reported in the construction compliance monitoring reports (Section 5.5). If a trigger is observed (see Section 3.2.6), a review will be initiated to determine the significance of the exceedance(s) and possible causes. The review will assess available surface water data, baseline data for the relevant waterway, recent rainfall records, and recent activities or recorded erosion/sediment control incidents occurring in the catchment. If the exceedance is determined to be attributable to the SBT Works, the event will be treated as an environmental incident and managed in accordance with the requirements of the CEMP. Corrective and preventative actions will be identified and implemented as part of that process.

5.4. Auditing

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental controls, compliance with this Program, the SSI 10051 Planning Approval, and other relevant approvals, licenses and guidelines.

Audit requirements are detailed in Section 7.13 of the CEMP.

5.5. Reporting

During construction, surface water quality data will be collected, tabulated and assessed against baseline conditions and performance criteria. Monitoring reports will be submitted to the DPE and the EPA within 30 days of the reporting period unless otherwise agreed with DPE.

Reporting requirements associated with the Program are presented in Table 10.

Table 10 Reporting requirements

Schedule (during construction)	Requirements	Recipient (relevant authority)
Water Monitoring Reports (every six months)	Data summary reports presenting tabulated surface water monitoring data collected during the reporting period. Surface water quality results will be presented and performance criteria exceedances will be highlighted. Applicable management responses will be documented.	EPA, DPE
EPL Monitoring Reports and Annual Returns	EPL monitoring reports will be prepared in accordance with the requirements of the EPL. An EPL Annual Return will be prepared in respect of each EPL reporting period (typically 12 months).	EPA
Construction Compliance Reports (every six months)	A summary of environmental monitoring.	DPE, ER
Monthly Environmental Report (every month)	Monitoring program performance will be documented in the Monthly Environmental Report where applicable. Any incidents and key environmental issues will be documented.	ER

6. Review and improvement

6.1. Continuous improvement

Monitoring data will be reviewed throughout the construction period to provide potential requirements to increase, or decrease, the number of sampling locations and/or the analytical suites. SSTVs will be reviewed for appropriateness following 12 months of construction monitoring. Alterations to SSTVs, monitoring locations, analytical suites, or frequencies will be reported in the Water Monitoring Reports (Section 5.5).

Continuous improvement of this Program will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets (detailed in Section 2.2), and the Project performance outcomes of the EIS for the purpose of identifying opportunities for improvement.

The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of environmental management and performance
- Determine the cause or causes of non-conformances and deficiencies
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies
- Verify the effectiveness of the corrective and preventative actions
- Document any changes in procedures resulting from process improvement
- Make comparisons with objectives and targets.

6.2. SWQMP update and amendment

The processes described in Section 7.13.3 of the CEMP may result in the need to update or revise this Program.

Revisions of this Program will be in accordance with the process outlined in Section 7.12.2 of the CEMP.

A copy of the updated Program and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure.

7. References

Acid Sulfate Soil Management Advisory Committee (ASSMAC) (1998). Acid Sulfate Soil Manual

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Annexure A Baseline surface water monitoring results

Table 11: Baseline Surface Water Monitoring SBT3 (from D/S Basin 3, Cardno, 2021)

Sampled Date	pH (Field)	Electrical conductivity (field)	DO (%S) (Field)	Temperature (Field)	Turbidity (Field)	Total Suspended Solids	Nitrogen (Total)	Phosphorus (Total)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
2/11/2015	6.9	540.2	44.1	21.87	88.3	30	1.6	0.36	0.002	<0.0001	0.002	0.01	0.002	<0.0001	0.003	0.014
8/12/2015	7.12	8620	21.9	22.2	12	21	2	0.9	0.004	<0.0001	<0.001	0.001	<0.001	<0.0001	0.003	<0.005
5/01/2016	7.45	1529	58.6	19.59	216	76	29.3	2.7	0.004	<0.0001	0.003	0.024	0.003	<0.0001	0.009	0.036
4/02/2016	7.43	832	65.8	22.25	15.5	<5	1.9	0.88	0.002	<0.0001	<0.001	0.003	<0.001	<0.0001	0.002	<0.005
2/03/2016	7.58	1474	42.5	22.17	17	10	1.4	0.52	0.005	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.002	0.01
7/04/2016	6.88	23134	93	20.69	11.9	29	0.8	0.31	0.002	<0.0001	<0.001	0.001	<0.001	<0.0001	<0.001	<0.005
5/05/2016	7.41	30315	57.5	7.89	6.4	<5	0.7	0.2	0.003	0.0002	<0.001	0.002	<0.001	<0.0001	<0.001	0.007
17/06/2016	7.08	923	53	10.08	29.7	5	3.6	0.22	<0.001	<0.0001	<0.001	0.005	<0.001	<0.0001	0.003	0.013
20/06/2016	7.48	872	76.5	13.36	102	19	8.9	1.19	0.002	<0.0001	<0.001	0.011	0.001	<0.0001	0.002	0.015
8/07/2016	7.04	1087	57.9	10.52	52	7	2.4	0.26	0.002	0.0002	<0.001	0.005	<0.001	<0.0001	0.002	0.007
5/08/2016	7.28	1278	81	10.67	40.2	10	4.3	0.41	0.001	<0.0001	<0.001	0.006	<0.001	<0.0001	0.003	0.008
12/09/2016	7.09	1058	64.9	14.61	28.3	11	1.9	0.46	0.001	<0.0001	0.001	0.014	0.001	<0.0001	0.003	0.008
7/10/2016	7.7	1924	49.6	15.37	14.9	7	1.4	0.3	0.002	<0.0001	<0.001	0.002	<0.001	<0.0001	0.002	0.007
4/11/2016	8	26837	59	16	6	16	<0.2	<0.02	<0.001	<0.0001	<0.001	0.002	<0.001	<0.0001	0.002	<0.005
12/12/2016	8.48	35009	59.5	23.48	5.5	16	0.7	0.16	0.003	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.002	<0.005
12/01/2017	7.34	39053	49.7	14.96	9.3	10	1.2	0.38	0.004	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.001	<0.005

Sampled Date	pH (Field)	Electrical conductivity (field)	DO (%S) (Field)	Temperature (Field)	Turbidity (Field)	Total Suspended Solids	Nitrogen (Total)	Phosphorus (Total)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
2/02/2017	8.03	35941	81.6	22.78	26.7	33	2.1	0.96	0.009	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.001	<0.005
8/02/2017	7.87	37055	53.9	21.96	50.4	19	3.8	1.81	0.008	<0.0001	<0.001	0.006	<0.001	<0.0001	0.004	0.014
13/03/2017	7.15	3626	52.3	21.92	16.9	10	4.4	0.44	0.002	<0.0001	<0.001	0.016	<0.001	<0.0001	0.01	0.02
10/04/2017	7.83	816.9	90.9	19.28	18.4	8	2.1	0.94	0.002	<0.0001	0.002	0.004	<0.001	<0.0001	0.003	0.006
8/05/2017	7.37	1691	38.7	11.46	32.2	<5	2	0.34	0.003	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.003	<0.005
5/06/2017	7.35	26086	53.9	12.03	13.3	9	<0.5	0.15	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.002	<0.005
13/07/2017	7.48	2975	62.6	7.29	59.8	8	1.6	0.14	<0.001	<0.0001	<0.001	0.001	<0.001	<0.0001	0.002	<0.005
8/08/2017	7.47	2370	47.1	9.46	10.8	<5	2.3	0.06	<0.001	<0.0001	<0.001	0.003	<0.001	<0.0001	0.002	0.009
8/09/2017	7.34	27507	64	9.42	25	10	<0.2	0.03	<0.001	<0.0001	0.001	<0.001	<0.001	<0.0001	0.002	<0.005
5/10/2017	6.97	1319	50.9	16.58	62.9	16	3.2	0.59	0.002	<0.0001	0.008	0.022	0.002	<0.0001	0.005	0.02
6/04/2018	7.96	35556	66.2	18.7	0.8	10	<0.5	0.33	0.003	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.004	<0.005
11/05/2018	7.64	18735	30	11.3	5	30	1.8	1.01	0.003	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.001	0.007
28/06/2018	7.65	35370	106	11.5	0.4	12	0.8	<0.05	<0.001	<0.0001	<0.001	0.002	<0.001	<0.0001	0.002	0.01
20/07/2018	7.22	451.6	61.4	7.5	73	39	18	0.42	0.001	<0.0001	0.001	0.014	0.002	<0.0001	0.004	0.017
17/08/2018	7.4	930	66.8	8.4	235.6	225	10.7	1.07	0.005	<0.0001	0.015	0.039	0.014	<0.0001	0.015	0.068
21/09/2018	7.08	611	49.4	10.6	25.9	46	12	0.63	0.001	<0.0001	<0.001	0.013	0.001	<0.0001	0.003	0.015
26/10/2018	6.5	1840	49.9	19.5	-	31	3.6	0.53	0.003	<0.0001	<0.001	0.014	<0.001	<0.0001	0.008	0.019

Sampled Date	pH (Field)	Electrical conductivity (field)	DO (%S) (Field)	Temperature (Field)	Turbidity (Field)	Total Suspended Solids	Nitrogen (Total)	Phosphorus (Total)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
26/11/2018	7.15	4551	43.6	16.6	23.5	26	5.5	0.36	0.002	<0.0001	<0.001	0.005	<0.001	<0.0001	0.008	0.008
17/12/2018	7.08	1100	46.5	23.8	218.9	52	6.8	1.34	0.004	<0.0001	0.007	0.021	0.006	<0.0001	0.009	0.038
30/01/2019	8.76	1222	6.3	23.8	57.5	54	3.6	1.73	0.008	<0.0001	0.001	0.005	0.002	<0.0001	0.005	0.011
2/04/2019	7.22	1712	35.9	16.1	116.6	230	4.3	1.41	0.004	<0.0001	0.003	0.009	0.002	<0.0001	0.007	0.018
17/09/2019	7.97	116.7	84.6	10.99	-	230	2.3	0.78	0.002	<0.0002	<0.001	0.006	<0.001	<0.0001	<0.001	<0.005
13/02/2020	7.2	507	50	25	-	46	4.5	0.45	0.002	<0.0002	<0.001	0.005	<0.001	<0.0001	0.002	0.008
16/03/2020	7.5	1177	41	22	-	12	2.24	0.05	0.002	<0.0002	<0.001	0.002	<0.001	<0.0001	0.002	<0.005
15/04/2020	7.5	862	67	17.4	-	5.1	1.82	0.43	0.002	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.001	<0.005
13/05/2020	7.4	680	45	11	-	3.3	1.64	0.41	0.001	<0.0002	<0.001	0.012	<0.001	<0.0001	0.002	0.006
18/06/2020	7.4	688	41	11	-	480	1.26	0.76	0.002	<0.0002	<0.001	0.018	<0.001	<0.0001	0.004	0.013
15/07/2020	7.7	866	108	12	-	8.6	1.5	0.78	0.001	<0.0002	<0.001	0.013	<0.001	<0.0001	0.004	0.01
13/08/2020	8	422	72	12	-	30	1.69	0.38	0.001	<0.0002	<0.001	0.004	<0.001	<0.0001	0.002	0.006
17/09/2020	7.7	628	91	20	-	7.6	1.2	0.24	<0.001	<0.0002	<0.001	0.002	<0.001	<0.0001	<0.001	<0.005
15/10/2020	8	1000	-	-	-	8.8	0.5	0.21	0.001	<0.0002	<0.001	0.004	<0.001	<0.0001	<0.001	<0.005
12/11/2020	7.7	809	81	22	-	20	1	0.43	0.001	<0.0002	<0.001	0.003	<0.001	<0.0001	<0.001	-
14/12/2020	7.8	630	95	-	-	50	0.8	0.67	0.002	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.002	0.006
21/01/2021	7.7	1161	52	24	-	18	1.3	0.62	0.002	<0.0002	<0.001	0.017	0.002	<0.0001	0.004	0.022

Sampled Date	pH (Field)	Electrical conductivity (field)	DO (%S) (Field)	Temperature (Field)	Turbidity (Field)	Total Suspended Solids	Nitrogen (Total)	Phosphorus (Total)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
18/02/2021	8	1300	100	-	-	14	3.4	0.68	0.002	<0.0002	<0.001	0.014	<0.001	<0.0001	0.004	0.01
29/03/2021	7	727	55	19	-	56	1.87	<0.5	0.002	<0.0002	<0.001	0.002	<0.001	<0.0001	0.001	<0.005
21/04/2021	7.3	1287	43	13	-	11	1.8	0.45	<0.001	<0.0002	<0.001	0.001	<0.001	<0.0001	0.001	<0.005
27/05/2021	7.3	1485	65		-	8	2.48	0.24	<0.001	<0.0002	<0.001	0.003	<0.001	<0.0001	0.002	<0.005
23/06/2021	7.5	1889	81	11	-	4.7	<0.2	0.13	<0.001	<0.0002	<0.001	0.001	<0.001	<0.0001	<0.001	<0.005

Table 12: Baseline Surface Water Monitoring SBT4 (from D/S Badgerys, Cardno, 2021

Sampled Date	pH (Field)	Electrical conductivity (field)	DO (%S) (Field)	Temperature (Field)	Turbidity (Field)	Total Suspended Solids	Nitrogen (Total)	Phosphorus (Total)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
2/11/2015	7.42	2764	37.2	20.42	66.6	12	0.5	0.04	0.002	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.002	<0.005
8/12/2015	7.83	1847	31.5	19.85	4.2	5	0.8	0.05	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.001	<0.005
5/01/2016	7.76	1720	49.9	19.78	62.4	26	3.2	0.44	0.001	<0.0001	<0.001	0.004	<0.001	<0.0001	0.004	0.012
4/02/2016	7.7	851	58.6	24.19	26.6	<5	1.2	0.11	0.001	<0.0001	<0.001	0.002	<0.001	<0.0001	0.002	<0.005
2/03/2016	7.64	19.73	19.1	21.9	9	6	0.5	0.04	0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.002	<0.005
7/04/2016	7.89	1516	47	18.66	3.67	7	0.4	0.03	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.001	<0.005
5/05/2016	7.72	1797	18.2	14.77	0.3	<5	0.2	0.01	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.001	<0.005
17/06/2016	7.45	1033	66.3	10.09	53	6	1.2	0.12	<0.001	<0.0001	<0.001	0.006	<0.001	<0.0001	0.002	0.008
20/06/2016	7.54	698	77.9	12.88	72	16	1.6	0.2	0.001	<0.0001	<0.001	0.003	<0.001	<0.0001	0.002	0.006
8/07/2016	7.48	1136	74.8	11.14	38.2	17	0.9	0.07	0.001	<0.0001	<0.001	0.003	<0.001	<0.0001	0.002	<0.005
5/08/2016	7.59	847	86.1	12.55	34.5	8	1.2	0.09	<0.001	<0.0001	<0.001	0.002	<0.001	<0.0001	0.002	0.005
12/09/2016	7.9	1463	89.9	15.86	14	21	2.9	0.51	0.002	<0.0001	<0.001	0.003	<0.001	<0.0001	0.004	0.006
7/10/2016	8.23	2222	63.1	17.54	22.8	13	1.3	0.07	0.001	<0.0001	<0.001	0.002	<0.001	<0.0001	0.002	<0.005
4/11/2016	8	2427	55	16	8	9	0.9	0.01	0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.004	<0.005
12/12/2016	7.4	1484	63.2	17.31	10.2	11	0.9	0.06	0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.001	<0.005
12/01/2017	7.23	1516	65.4	23.36	12.1	5	0.8	0.08	0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.001	<0.005

Sampled Date	pH (Field)	Electrical conductivity (field)	DO (%S) (Field)	Temperature (Field)	Turbidity (Field)	Total Suspended Solids	Nitrogen (Total)	Phosphorus (Total)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
2/02/2017	7.7	1691	35.7	22.47	4.6	12	0.4	0.09	0.003	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.001	<0.005
8/02/2017	7.91	749.4	54.2	23.8	370.6	116	2	0.26	0.002	<0.0001	0.003	0.007	0.002	<0.0001	0.003	0.013
13/03/2017	8.31	766.3	30.9	19.13	35	13	0.9	0.04	<0.001	<0.0001	<0.001	0.001	<0.001	<0.0001	0.002	<0.005
10/04/2017	7.74	963	74.4	17.98	41.2	16	1.5	0.2	0.002	<0.0001	0.001	0.003	0.001	<0.0001	0.003	0.006
8/05/2017	7.77	1734	47.4	12.28	18.3	<5	0.9	0.02	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.002	<0.005
5/06/2017	7.82	2183	55	11.13	19	8	0.6	0.03	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.002	<0.005
13/07/2017	7.82	2284	73	7.34	10.4	5	0.7	0.01	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.005
8/08/2017	8.13	2520	77.7	9.04	18.6	<5	0.7	0.02	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.005
8/09/2017	8.2	1882	76.5	10.5	3.6	6	0.2	0.02	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.002	<0.005
5/10/2017	7.85	1783	109.1	15.5	2.6	<5	<0.1	0.02	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.005
6/04/2018	7.6	476	48.8	18.1	17.1	14	0.8	0.05	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.005
11/05/2018	7.86	423.8	88.7	9.9	167.2	627	4.2	0.46	0.003	<0.0001	0.004	0.009	0.005	<0.0001	0.006	0.03
28/06/2018	7.91	366.1	91	10	5.3	52	1.7	0.08	0.001	<0.0001	0.002	0.007	0.002	<0.0001	0.005	0.023
26/10/2018	7.49	129.3	72.5	18.5	7.6	27	1.1	0.03	<0.001	<0.0001	<0.001	0.002	<0.001	<0.0001	0.003	0.007
17/12/2018	6.61	480.4	3.4	20.8	26.9	33	1.9	0.33	<0.001	<0.0001	<0.001	0.005	<0.001	<0.0001	0.003	0.01
30/01/2019	8.67	134.1	31.5	24.1	55.6	20	1.3	0.14	0.002	<0.0001	<0.001	0.006	<0.001	<0.0001	0.002	0.006
2/04/2019	7.64	110.5	20.5	15.5	5.1	11	1.3	0.13	<0.001	<0.0001	<0.001	0.002	<0.001	<0.0001	0.001	<0.005

Sampled Date	pH (Field)	Electrical conductivity (field)	DO (%S) (Field)	Temperature (Field)	Turbidity (Field)	Total Suspended Solids	Nitrogen (Total)	Phosphorus (Total)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
20/06/2019	7.99	101.8	69.8	9.96	8.9	9	0.93	0.02	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	0.001	<0.005
16/07/2019	7.7	59.2	80.8	9.25	-	9.3	0.64	0.03	<0.001	<0.0002	<0.001	0.003	<0.001	<0.0001	<0.001	<0.005
17/09/2019	7.66	39.6	91.5	10.76	-	21	0.68	0.05	<0.001	<0.0002	<0.001	0.001	<0.001	<0.0001	<0.001	<0.005
16/10/2019	7.39	70.3	42.9	15.1	-	13	0.45	0.04	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.005
13/02/2020	7.1	470	32.1	24	-	25	2.7	0.03	0.001	<0.0002	<0.001	0.005	<0.001	<0.0001	0.002	<0.005
16/03/2020	7.9	417	13	19	-	8.1	0.91	0.09	0.001	<0.0002	<0.001	0.002	<0.001	<0.0001	<0.001	<0.005
15/04/2020	8	293	22	15.1	-	4.1	1.1	0.16	<0.001	<0.0002	<0.001	0.03	<0.001	<0.0001	0.004	0.012
13/05/2020	7.9	196	32	11	-	1.4	0.98	0.1	<0.001	<0.0002	<0.001	0.026	<0.001	<0.0001	0.003	0.008
18/06/2020	7.5	358	35	12	-	280	1.18	0.08	<0.001	<0.0002	<0.001	0.016	<0.001	<0.0001	0.003	0.011
15/07/2020	7.9	262	67	12	-	20	0.7	0.04	<0.001	<0.0002	<0.001	0.015	<0.001	<0.0001	0.003	0.009
13/08/2020	7.8	1031	40	12	-	470	51.1	3.3	0.002	<0.0002	<0.001	0.009	<0.001	<0.0001	0.004	0.011
17/09/2020	7.7	1223	42	14	-	30	12.2	1.1	0.003	<0.0002	<0.001	0.007	<0.001	<0.0001	0.004	<0.005
15/10/2020	8.1	1600	-	-	-	11	5.83	1.5	0.003	<0.0002	<0.001	0.004	<0.001	<0.0001	0.003	<0.005
12/11/2020	7.7	888	52	19	-	7.9	4.7	0.28	0.001	<0.0002	<0.001	0.006	<0.001	<0.0001	0.003	-
14/12/2020	8	800	98	-	-	8.5	1.47	0.31	0.002	<0.0002	<0.001	0.004	<0.001	<0.0001	0.001	0.011
21/01/2021	7.9	957	15	19	-	14	1.44	0.14	<0.001	<0.0002	<0.001	0.044	0.002	<0.0001	0.005	0.049
18/02/2021	7.8	860	100	-	-	15	0.6	0.11	0.001	<0.0002	<0.001	0.014	<0.001	<0.0001	0.003	0.013

Sampled Date	pH (Field)	Electrical conductivity (field)	DO (%S) (Field)	Temperature (Field)	Turbidity (Field)	Total Suspended Solids	Nitrogen (Total)	Phosphorus (Total)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
29/03/2021	7.6	1493	21	20	-	56	23.1	8.6	0.004	<0.0002	<0.001	0.004	<0.001	<0.0001	0.003	0.007
21/04/2021	7.7	2271	9	14	-	22	26.4	6.4	<0.01	<0.001	<0.01	<0.01	<0.001	<0.0001	<0.01	<0.05
27/05/2021	7.2	1231	39		-	29	6.1	1.3	0.002	<0.0002	<0.001	0.005	<0.001	<0.0001	0.003	0.011
23/06/2021	7.8	1462	66	10	-	14	1.5	0.51	<0.001	<0.0002	<0.001	0.004	<0.001	<0.0001	0.002	<0.005

Annexure C Procedures

CONTINGENCY GROUNDWATER MONITORING PROCEDURE

MANAGEMENT AND RESPONSIBILITY

DAILY VISUAL ASSESSMENT OF GROUNDWATER INFLOW

Is the inflow volume of groundwater significant enough that there is the potential it cannot be managed in accordance with the Water Reuse and Discharge Management Procedure (SMCSWTSE-JCG-TSE-EM-MPR-003002) and will need to be pumped out and transported to an appropriate licenced facility?

Site Supervisor
Site Engineer

Y

GROUNDWATER INFLOW CALCULATION

- The Site Supervisor or Site Engineer will immediately contact the Project Engineer and the Environment Coordinator.
- The Project Engineer will immediately undertake a calculation of groundwater inflow and notify the Environment Coordinator and Site Supervisor of the results.

N

NO FURTHER ACTION

Site Supervisor
Project Engineer
Environmental Coordinator

Does the assessment confirm there is the potential that inflow volumes cannot be managed in accordance with the Water Reuse and Discharge Management Procedure (SMCSWTSE-JCG-TSE-EM-MPR-003002)?

Project Engineer

Y

NOTIFICATION

Immediately notify Project Manager, Construction Manager, and Environment Manager. Environment Manager to notify Crown Lands and Water Division - Department of Industry (formerly DPI Water).

N

NO FURTHER ACTION

Project Engineer
Environment Manager

DEVELOP SITE SPECIFIC GROUNDWATER WATER MANAGEMENT STRATEGY

The Project Manager will liaise with the Project Environment Manager and Design Team Manager to determine measures to manage the groundwater including the need for a change in design and/or construction methodology.

Construction Director
Construction Manager
Project Manager
Project Engineer
Design Team Manager
Environment Manager

IMPLEMENT SITE SPECIFIC GROUNDWATER MANAGEMENT STRATEGY

The Project Engineer is to implement the site specific Groundwater Management Strategy in consultation with the Site Supervisor and Environment Coordinator.

Project Engineer
Site Supervisor
Environmental Coordinator

EROSION AND SEDIMENT CONTROL PROCEDURE

MANAGEMENT AND RESPONSIBILITY

Inform Environmental Coordinator of upcoming works. Have the works been included in a current Erosion Sediment Control Plan (ESCP)?

Project Engineer

N

ESCP to be compiled by site Environmental Coordinator in collaboration with the Site Engineer in accordance with "Landcom (2004) Soils and Construction Vol.1, 4th Edition, March 2004 Managing Urban Stormwater" (Blue Book). Environmental Coordinator and Site Engineer are to undertake a site inspection to obtain an understanding of any constraints and if any additional environmental controls are required.

Y

Works can proceed in accordance with the ESCP.

Environmental Coordinator
Site Engineer

HOLD POINT – Excavation works cannot commence / recommence until an ESCP is developed or reviewed and deemed appropriate by the Environmental Coordinator.

Does the ESCP take into consideration the following aspects?

- Clean/dirty water separation and water diversion; dirty water (onsite water) must be captured and treated or pass through appropriate controls
- Topography/slope/natural drainage lines; slope breaks are to be implemented on steep slopes to slow water movement and reduce erosion. Design batter slope gradients and surface treatments to minimise erosion risk
- Areas of unsealed ground; ground cover is to be implemented on unsealed ground/stockpiles using geofabric or polymer
- Discharge points and on-site detention of water; include suitably designed scour and erosion controls at drainage and sedimentation basin outlet discharge points
- Use of compostable or reusable temporary erosion and sediment control devices where practicable.

HOLD POINT – No runoff (sediment laden or otherwise) is permitted to leave site unless in accordance with the Water Reuse and Discharge Management Procedure

- Implement boundary controls at the site perimeters and surrounding storm water drains if works are being undertaken in close proximity
- Controls are to be inspected regularly including before and after rainfall and maintained as required.

Final version of the ESCP must be signed by the Site Engineer, Environmental Coordinator and Site Supervisor. Content to be included in Toolbox Talk and ESCP to be displayed on the site notice board.

Project Engineer
Site Engineer
Environmental Coordinator
Site Supervisor

WATER REUSE AND DISCHARGE MANAGEMENT PROCEDURE

MANAGEMENT AND RESPONSIBILITY

REDUCE THE VOLUME OF WATER IN EXCAVATIONS/CONCRETE WASH-OUTS

Divert surface runoff around excavations/ concrete wash-outs using cut-off drains, temporary pipe drains, earth mounds etc.

Site Supervisor

IDENTIFY POTENTIAL SOURCES OF CONTAMINANTS

Potential sources of contaminants i.e. PASS, groundwater, hydrocarbons etc. to be identified. Limit opportunity for further contamination. Determine if further sampling, testing and treatment is required prior to discharge.

Site Supervisor, Environmental Coordinator

Is water proposed to be discharged off-site, transferred to a sediment basins, or transferred between excavations?

Site Supervisor

Y

HOLD POINT

A Dewatering and Discharge Permit must be approved by the Environment Manager prior to discharge of water from the premises or transfer of water between excavations or basins. Testing and, where necessary, treatment of water must be undertaken prior to discharge/transfer. Testing may occur within an excavation, sediment basin or water treatment plant.

Environment Manager, Environmental Coordinator, Site Supervisor

WATER DISCHARGE

- Appropriate scour protection of the offsite discharge location must be in place to minimise the risk of erosion. **Note:** no works to be undertaken off the premise without Environment Manager approval.
- Visual inspection is required for the duration of the discharge operation (excluding water treatment plants) to ensure sediment from the bottom is not discharged.
- Pump Inlet hoses are to be fixed in place to restrict movement minimise the risk of sediment being sucked in.
- Syphons/ water release valves may be used to dewater sediment basins to minimise reliance on pumps. Prior to release sediment levels to be inspected to ensure the level is below the syphon/ valve inlet.

N

ONSITE REUSE

A Dewatering and Discharge Permit is not required to:

- Transfer water to water treatment plants
- Transfer water between sumps/fish tanks in tunnels/station box excavations
- Reuse treated water from water treatment plants
- i.e. water carts, street sweepers etc.
- Use rainwater from rainwater tanks

Washing down of hard surfaces is not permitted where there is a risk of water discharging to stormwater.

Site Supervisor

MONITORING

DISCHARGE OFF THE PREMISES

Parameter and Criteria	Sampling method
Sediment Ponds TSS (<50mg/L)	Sampling and laboratory testing and/or probe/ turbidity tube
pH (6.5 -8.5)	Probe
Oil and Grease (none visible)	Visual Inspection / 5mg/l

ADDITIONAL WATER TREATMENT PLANT DISCHARGE CRITERIA

Parameter	Criteria
Ammonia	**1200 µg/L**
Manganese	**2500 µg/L**
Iron	**300 µg/L**
Cadmium	**5.5 µg/L**
Chromium (VI)	**20 µg/L***
Copper	**3 µg/L**
Nickel	**200 µg/L**
Lead	**6.6 µg/L**
Zinc	**23 µg/L**
Mercury	**0.4 µg/L**

* 90 percentile value. No 100% criteria (upper limit)

- Based on a 5-day rainfall depth (mm) for 85th percentile, should rainfall received within a 5 day period exceed 38.8 mm, it is expected that sediment basins may discharge naturally over their spillway without an opportunity to flocculate and test basins for TSS, pH or the presence of oil and grease. It should also be noted that other types of erosion controls may also fail during such an event and that repair work will be undertaken when it has been determined by the Site Supervisor that it is safe to do so.
- Erosion and Sediment Control Plans (ERSED) must be reviewed prior to commencing work if there has been significant rain (i.e. >10 mm/24hr). If the relevant sediment basin is at or near capacity, works that direct water towards the basin cannot be undertaken (see Erosion and Sediment Control Procedure).

Environmental Protection Licence

Prior to sediment basins or water treatment plants becoming active, the
Discharge Point Register must be updated and submitted to the EPA.

REUSE WITH THE PREMISES

Parameter and Criteria	Sampling method
Oil and Grease (none visible)	Visual Inspection
No potential for water to leave the premises	Visual Inspection
No surface runoff will be generated from the reuse (reuse includes dust suppression, watering retained vegetation etc.)	Visual Inspection
No potential for water to reach any watercourse	Visual Inspection
Concrete Washout Water only no visible fines (in addition to criteria above)	Visual Inspection
If transporting water to sediment basins, the sediment basin must not be overfilled	Visual Inspection

Safety and Sampling

- Use of calibrated water monitoring equipment and/or visual assessment will be undertaken for the below parameters during all discharges and reuse to ensure water criteria is met.
- Always wear appropriate PPE (refer to SWMS)
- Always ensure personal safety when sampling (refer to SWMS).
- DO NOT inhale gases or aerosols formed from sampled material or associated preservatives in sample bottles.
- Maintain high standards of personal hygiene when sampling, **DO NOT** eat or smoke when sampling and ALWAYS wash hands prior to and following sampling.
- **DO NOT** enter sediment basins during sampling.

Treatment of Water

pH Levels

- If pH of water is outside the range 6.5-8.5 it must be neutralised prior to discharge
- To **decrease** pH, dose with acid; 500ml of acid lowers 7000L of water by approximately 1.5 pH.
- To **increase** pH, dose with caustic (e.g. Builders Lime)

Turbidity

- Treating the water with Alum, Gypsum or other suitable water treatment process is required where turbidity is greater than 50mg/L.
- When treating in sediment basins or excavations, distribute chemicals across the water surface to maximise the effectiveness of the flocculant
- Application rates should be based on the Blue Book and/or product specifications.

Annexure D Consultation Report

Consultation Report – Soil and Water Management Sub-Plan

Sydney Metro Western Sydney Airport Station Boxes and Tunnelling Works

Project number	WSA-200-SBT
Document number	SMWSASBT-CPG-SWD-SW000-EN-RPT-295007
Revision date	11 August 2022
Revision	0

Document approval

Rev	Date	Prepared by	Reviewed by	Approved by	Signature
0	11/08/2022	D Corish	E Kline	Nil	

Table of contents

Table of tables

Annexures

1. Introduction

1.1. Background

The Sydney Metro Western Sydney Airport (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

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 Project 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).

1.2. Scope of the report

Reflecting the requirements of the SSI 10051 Planning Approval, this report has been prepared to provide the evidence of consultation with the identified parties during the development of the following Subject Documents:

- Soil and Water Management Sub-Plan (SMWSASBT-CPG-1NL-NL000-WA-PLN-000002, Rev A)
- Groundwater Monitoring Program (SMWSASBT-CPG-SWD-SW000-GE-RPT-040404, Rev D)
- Surface Water Quality Monitoring Program (SMWSASBT-CPG-1NL-NL000-WA-PRG-000001, Rev B).

2. Consultation Requirements

2.1. SSI 10051 Planning Approval

The Conditions of Approval relevant to stakeholder consultation on the Subject Documents are listed in Table 1.

Table 1: Conditions of Approval

<table>
<tr><th>Ref</th><th>Condition</th></tr>
<tr><td>A6</td><td>Where the terms of this approval require a document or monitoring program to be prepared, or a review to be undertaken, in consultation with identified parties, evidence of the consultation undertaken must be submitted to the Planning Secretary with the document. The evidence must include:

(a) documentation of the engagement with the party identified in the condition of approval that has occurred before submitting the document for approval;

(b) a log of the dates of engagement or attempted engagement with the identified party and a summary of the issues raised by them;

(c) documentation of the follow-up with the identified party(s) where feedback has not been provided to confirm that the party(s) has none or has failed to provide feedback after repeated requests;

(d) outline of the issues raised by the identified party(s) and how they have been addressed; and

(e) a description of the outstanding issues raised by the identified party(s) and the reasons why they have not been addressed.</td></tr>
<tr><td>C5</td><td>Of the CEMP Sub-plans required under Condition C1, the following CEMP Sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP Sub-plan. Details of issues raised by a government agency during consultation (as required by Condition A6) must be provided with the relevant CEMP Sub-plan when submitted to the Planning Secretary / ER (whichever is applicable). Where a government agency(ies) request(s) is not included, the Proponent must provide the Planning Secretary / ER (whichever is applicable) justification as to why.

<table>
<tr><th></th><th>Required CEMP Sub-plan</th><th>Relevant government agencies to be consulted for each CEMP Sub-plan</th></tr>
<tr><td>(a)</td><td>Noise and vibration</td><td>Relevant Councils and WaterNSW (in relation to its assets)</td></tr>
<tr><td>(b)</td><td>Flora and fauna</td><td>DPIE EES, DPI Fisheries, and Relevant Councils</td></tr>
<tr><td>(c)</td><td>Soil and Water</td><td>DPI Fisheries, and Relevant Councils</td></tr>
<tr><td>(d)</td><td>Non-Aboriginal heritage</td><td>Relevant Councils, WaterNSW and Heritage NSW</td></tr>
</table></td></tr>
<tr><td>C13</td><td>The following Construction Monitoring Programs must be prepared in consultation with the relevant government agencies (as required by Condition A6) identified for each to compare actual performance of construction of the CSSI against the performance predicted in the documents listed in Condition A1 or in the CEMP. Where a government agency(ies) request(s) is not included, the Proponent must provide the Planning Secretary / ER (whichever is applicable) justification as to why.

<table>
<tr><th></th><th>Required Construction Monitoring Programs</th><th>Relevant government agencies to be consulted for each Construction Monitoring Program</th></tr>
<tr><td>(a)</td><td>Noise and vibration</td><td>Relevant Councils and WaterNSW (in relation to its assets)</td></tr>
<tr><td>(b)</td><td>Surface water quality</td><td>DPIE Water, DPI Fisheries, and Relevant Councils</td></tr>
<tr><td>(c)</td><td>Groundwater</td><td>DPIE Water</td></tr>
<tr><td>(d)</td><td>Air Quality</td><td>Relevant Councils</td></tr>
</table></td></tr>
</table>

2.2. Revised Environmental Mitigation Measures

The Revised Environmental Mitigation Measures (REMMs) relevant to stakeholder consultation on the Subject Documents are listed in Table 2.

REMM WQ1 notes that the Surface Water Quality Monitoring Program would be prepared in consultation with Western Sydney Airport where relevant. The off-airport SBT Works (which are the subject of the Surface Water Quality Monitoring Program) are not located up-stream of the Western Sydney Airport and as such, consultation was not triggered.

Table 2: Revised Environmental Mitigation Measures

Ref	Condition
WQ1	A surface water quality monitoring program would be implemented to monitor water quality during construction. The program would be developed in consultation with (as relevant) Western Sydney Airport, NSW Environment Protection Authority, relevant sections of Department of Planning, Industry and Environment and relevant local councils. The program would consider monitoring being undertaken as part of other infrastructure projects such as the M12 Motorway and Western Sydney International On-airport, the water quality monitoring program would ensure that works meet the requirements under Schedule 2 of the Airports (Environment Protection) Regulations 1997 The program would monitor all construction discharge locations.

3. Consultation summary

In accordance with the SSI 10051 Planning Approval and the REMMs, the Subject Documents have been prepared in consultation with the identified parties. A summary of the consultation is provided in Table 3.

Table 3: Stakeholder consultation summary

Stakeholder	Consultation Summary	Status	Reference
Soil and Water Management Sub-Plan			
Department of Primary Industries (DPI) Fisheries	Stakeholder confirmed that there are no issues with the Subject Document.	No action required.	Annexure A
Penrith City Council	Stakeholder confirmed that there are no issues with the Subject Document.	No action required.	Annexure B
Liverpool City Council	Stakeholder did not provide a response despite repeated requests.	No action required.	Annexure C
Groundwater Monitoring Program			
Department of Planning and Environment (DPE) Water	Stakeholder confirmed that there are no issues with the Subject Document.	No action required.	Annexure D
Surface Water Quality Monitoring Program			
DPE Water	Stakeholder confirmed that there are no issues with the Subject Document.	No action required.	Annexure D
DPI Fisheries	Stakeholder confirmed that there are no issues with the Subject Document.	No action required.	Annexure A
Environment Protection Authority (EPA)	Stakeholder confirmed that there are no issues with the Subject Document.	No action required.	Annexure E
Penrith City Council	Stakeholder confirmed that there are no issues with the Subject Document.	No action required.	Annexure B
Liverpool City Council	Stakeholder did not provide a response despite repeated requests.	No action required.	Annexure C

Annexure A DPI Fisheries Consultation Evidence

Table 4: Consultation Log

In/out	Date and time	Method of contact	Details of contact
Out	26-May-22 4:56pm	Email	Subject Documents provided to stakeholder
In	31-May-22 11:16am	Email	Stakeholder confirmed no issues with the Subject Documents.
Out	20-Jul-22 3:02pm	Email	Request confirmation of no issues with the Soil and Water Management Sub-Plan and Surface Water Quality Monitoring Program
In	29-Jul-22 9:43am	Email	Stakeholder confirmed no issues with the Subject Documents.

From: Denise Corish <denise.corish@treoenvironment.com>
Sent: Thursday, 26 May 2022 4:56 PM
To: Josi Hollywood <josi.hollywood@dpi.nsw.gov.au>
Cc: Mathew Billings <Mathew.Billings@cpbcon.com.au>; joshua.cosier@cpbcon.com.au
Subject: SSI 10051 Sydney Metro Western Sydney Airport - Substation Boxes and Tunnelling (SSD1-25/2020) - DPI Fisheries Consultation

Dear Josi
On behalf of CPB Contractors and Ghella JV, the documents listed below are being issued from the Sydney Metro Western Sydney Airport Substation Boxes and Tunnelling (SBT) Contractor to DPI Fisheries for consultation. Completion of the comments registers (available in the Dropbox) or confirmation of no comments is requested by **21 June 2022**.

- *SBT NSW Soil and Water Management Sub-Plan_Rev A (including the Surface Water Quality Monitoring Program, Rev B) (Condition CoA C5 and C13)*
- *SBT NSW Flora and Fauna Management Sub-Plan_Rev A*

The documents are accessible from the following Dropbox:
https://www.dropbox.com/scl/fo/h9adgynxkzjoknnqujvtc/h?dl=0&rlkey=tl77cxgekm4533p93z4oefpnj

The documents have been drafted to meet requirement of Sydney Metro Western Sydney Airport SSI 10051 Planning Approval and associated contract requirements. Sub-plans are issued for consultation in accordance with Condition of Approval (CoA) C5 and monitoring program are issued for consultation in accordance with CoA C13.

Please note that consultation with DPI Fisheries is not required with respect to the Groundwater Monitoring Program (Annexure A of the Soil and Water Management Sub-Plan). This document is submitted for information only.

If you have any questions during the consultation period, please do not hesitate to contact me directly.

Kind regards,
Denise

Denise Corish

2

From: Josi Hollywood <josi.hollywood@dpi.nsw.gov.au>
Sent: Tuesday, 31 May 2022 11:16 AM
To: Denise Corish <denise.corish@treoenvironment.com>
Subject: RE: SSI 10051 Sydney Metro Western Sydney Airport - Substation Boxes and Tunnelling (SSD1-25/2020) - DPI Fisheries Consultation

Good morning Ms Corish,
Please find attached DPI Fisheries advice in this matter.
Regards,
Josi

Josi Hollywood | Fisheries Manager – Coastal Systems Unit
NSW Department of Primary Industries | Fisheries
Block E, Level 3, 84 Crown Street, Wollongong NSW 2500
ALL MAIL TO: DPI Fisheries, Attn: R. Philps,1243 Bruxner Hwy, Wollongbar NSW 2477
T: +61 2 4222 8311 | M: +61 (0437 319 941) | E: *josi.hollywood@dpi.nsw.gov.au*

DPI Fisheries acknowledges that it stands on Country which always was and always will be Aboriginal land. We acknowledge the Traditional Custodians of the land and waters, and we show our respect for Elders past, present and emerging. We are committed to providing places in which Aboriginal people are included socially, culturally and economically through thoughtful and collaborative approaches to our work.

Department of Primary Industries

Our Ref: C22/334 30 May 2022

Your Ref: SSI-10051 (CoA C5 &C13)

Ms Denise Corish
Manager, Environmental Performance & Assurance
Treo Environment
78 Denison Street
Bondi Junction NSW 2022
c/o: *denise.corish@trioenvironment.com*

Ms Corish,

Consultation for Sydney Metro Western Sydney Airport – Substation Boxes & Tunnelling (SSD1-25/2020) – Conditions of Approval C5 & C13 – Soil & Water Management Sub-plan (RevA) and Flora & Fauna Management Sub-plan (RevA)

Thank you for your referral of 26/05/2022 seeking comment on the proposal from DPI Fisheries, a division of NSW Department of Primary Industries on the proposed works stated above.

DPI Fisheries is responsible for ensuring that fish stocks are conserved and that there is no net loss of key fish habitats upon which they depend. To achieve this, DPI Fisheries ensures that developments comply with the requirements of the *Fisheries Management Act 1994* (FM Act) (namely the aquatic habitat protection and threatened species conservation provisions in Parts 7 and 7A of the Act, respectively), and the associated *Policy and Guidelines for Fish Habitat Conservation and Management (2013)*. DPI Fisheries is also responsible for ensuring the sustainable management of commercial, recreational and Aboriginal cultural fishing, aquaculture, marine parks and aquatic reserves within NSW.

DPI Fisheries has reviewed *Substation Boxes & Tunnelling SBT Flora and Fauna Management Sub-Plan (Revision A)*. In light of the above provisions makes the following comments:

1. No marine vegetation is to be harmed in these works.
2. Predicted threatened species that could occur within the project footprint were assessed to have a very low likelihood of occurrence.
3. A Dam Dewatering Procedure (Annexure E) has been prepared.
4. Fauna rescue actions have been planned and are covered under an appropriate Permit and meet relevant legislation under the NSW Fisheries Management Act 1994 and the NSW Biosecurity Act 2016

If you require any further information, please contact me on (02) 4222 8311 or *josi.hollywood@dpi.nsw.gov.au*

Yours sincerely,

J. Hollywood

Josi Hollywood
Fisheries Manager, Coastal Systems Unit

Denise Corish

From: Denise Corish
Sent: Wednesday, 20 July 2022 3:02 PM
To: Josi Hollywood
Subject: RE: SSI 10051 Sydney Metro Western Sydney Airport - Substation Boxes and Tunnelling (SSD1-25/2020) - DPI Fisheries Consultation
Attachments: C22-334.pdf

Good afternoon Ms Hollywood,
Thanks again for your prompt review of the following documents issued from the Sydney Metro Western Sydney Airport Substation Boxes and Tunnelling (SBT) Contractor

- *SBT NSW Soil and Water Management Sub-Plan_Rev A (including the Surface Water Quality Monitoring Program, Rev B) (Condition CoA C5 and C13)*
- *SBT NSW Flora and Fauna Management Sub-Plan_Rev A*

I note that the heading of your letter (attached) references both of the above documents. However, the main body of the letter does not specifically mention the Soil and Water Management Sub-Plan (including the Surface Water Quality Monitoring Program). Can I trouble you to confirm whether DPI Fisheries has any comments on these documents?

Kind regards,
Denise

Denise Corish
Manager, Environmental Performance and Assurance

M: 0448 039 552
78 Denison Street
Bondi Junction NSW 2022
denise.corish@treoenvironment.com
www.treoenvironment.com

RE: SSI 10051 Sydney Metro Western Sydney Airport - Substation Boxes and Tunnelling (SSD1-25/20...

JH Josi Hollywood <josi.hollywood@dpi.nsw.gov.au>
To Denise Corish

Reply | Reply All | Forward | ...

Fri 29/07/2022 9:43 AM

You replied to this message on 29/07/2022 9:45 AM.

C22-334Rev1.pdf
82 KB

Good morning Ms Corish,
Please find attached DPI Fisheries updated advice in this matter.
Regards,
Josi

Josi Hollywood
Fisheries Manager - Coastal Systems
Aboriginal Fishing & Marine & Coastal Environment | DPI - Fisheries
Department of Regional NSW
T +61 2 4222 8311 **M** +61 437 319 941 **E** josi.hollywood@dpi.nsw.gov.au
regional.nsw.gov.au
Block E, Level 3, 84 Crowns Street
Wollongong NSW 2500

Department of Primary Industries
Department of Regional NSW

Department of Primary Industries

Our Ref: C22/334Rev1 29 July 2022

Your Ref: SSI-10051 (CoA C5 & C13)

Ms Denise Corish
Manager, Environmental Performance & Assurance
Treo Environment
78 Denison Street
Bondi Junction NSW 2022
c/o: *denise.corish@trioenvironment.com*

Ms Corish,

Consultation for Sydney Metro Western Sydney Airport – Substation Boxes & Tunnelling (SSD1-25/2020) – Conditions of Approval C5 & C13 – Soil & Water Management Sub-plan (RevA) and Flora & Fauna Management Sub-plan (RevA)

Thank you for your referral seeking comment on the proposal from DPI Fisheries, a division of NSW Department of Primary Industries on the proposed works stated above. This advice updates and replaces C22/334 issued by this office on 30/05/2022.

DPI Fisheries is responsible for ensuring that fish stocks are conserved and that there is no net loss of key fish habitats upon which they depend. To achieve this, DPI Fisheries ensures that developments comply with the requirements of the *Fisheries Management Act 1994* (FM Act) (namely the aquatic habitat protection and threatened species conservation provisions in Parts 7 and 7A of the Act, respectively), and the associated *Policy and Guidelines for Fish Habitat Conservation and Management (2013)*. DPI Fisheries is also responsible for ensuring the sustainable management of commercial, recreational and Aboriginal cultural fishing, aquaculture, marine parks and aquatic reserves within NSW.

DPI Fisheries has reviewed *Substation Boxes & Tunnelling SBT Flora and Fauna Management Sub-Plan (Revision A)* and the *Soil and Water Management Sub-Plan_Rev A (including the Surface Water Quality Monitoring Program)*. In light of the above provisions makes the following comments:

1. No marine vegetation is to be harmed in these works.
2. Predicted threatened species that could occur within the project footprint were assessed to have a very low likelihood of occurrence.
3. A Dam Dewatering Procedure (Annexure E) has been prepared.
4. Fauna rescue actions have been planned and are covered under an appropriate Permit and meet relevant legislation under the NSW Fisheries Management Act 1994.

If you require any further information, please contact me on (02) 4222 8311 or *josi.hollywood@dpi.nsw.gov.au*

Yours sincerely,

J. Hollywood

Josi Hollywood
Fisheries Manager, Coastal Systems Unit

Annexure B Penrith City Council Consultation Evidence

Table 5: Consultation Log

In/out	Date and time	Method of contact	Details of contact
Out	26-May-22, 4:58pm	Email	Subject Documents provided to stakeholder
In	27-Jun-22, 8:47am	Email	Stakeholder confirmed no issues with the Subject Documents.

From: Denise Corish <denise.corish@treoenvironment.com>
Sent: Thursday, 26 May 2022 4:58 PM
To: Lauren Vallejo <Lauren.Vallejo@penrith.city>
Cc: Mathew Billings <Mathew.Billings@cpbcon.com.au>; joshua.cosier@cpbcon.com.au
Subject: RE: CSSI 10051 Sydney Metro Western Sydney Airport - Substation Boxes and Tunnelling (SSD1-25/2020) - PCC Consultation

EXTERNAL EMAIL: This email was received from outside the organisation. Use caution when clicking any links or opening attachments.

Dear Lauren
On behalf of CPB Contractors and Ghella JV, the documents listed below are being issued from the Sydney Metro Western Sydney Airport Substation Boxes and Tunnelling (SBT) Contractor to Penrith City Council for consultation. Completion of the comments register (available in the Dropbox) or confirmation of no comments is requested by **27 June 2022**.

- *SBT NSW Soil and Water Management Sub-Plan_Rev A (including the Surface Water Quality Monitoring Program, Rev B) (Condition CoA C5 and C13) – accessible from the following Dropbox: https://www.dropbox.com/scl/fo/7e37jvwrtohg8w48zdx1m/h?dl=0&rlkey=us64e7ijh28irkk1egbsa0i6c*

The documents have been drafted to meet requirement of Sydney Metro Western Sydney Airport SSI 10051 Planning Approval and associated contract requirements. Sub-plans are issued for consultation in accordance with Condition of Approval (CoA) C5 and monitoring program are issued for consultation in accordance with CoA C13.

Please note that consultation with Penrith City Council is not required with respect to the Groundwater Monitoring Program (Annexure A of the Sub-Plan). This document is submitted for information only.

If you have any questions during the consultation period, please do not hesitate to contact me directly.

Kind regards,
Denise

Denise Corish
Manager, Environmental Performance and Assurance

RE: CSSI 10051 Sydney Metro Western Sydney Airport - Substation Boxes and Tunnelling (SSD1-25/2...

Reply | Reply All | Forward

LV Lauren Vallejo <Lauren.Vallejo@penrith.city>
To Denise Corish
Cc Mathew Billings; joshua.cosier@cpbcon.com.au; Shaun Hazell; Michael Tait

Mon 27/06/2022 8:47 AM

Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

Hi Denise

With reference to the email below, Council staff have reviewed the SBT Soil & Water Management Sub-Plan (Revision A) and provide the following:

The document is comprehensive.
The Annexures for a Groundwater Monitoring Program and Surface Water Monitoring Program are highly detailed.
Council staff acknowledge that the works will be subject to an EPL from the EPA and that further site-specific Erosion & Sediment Control Plans are to be developed in the detailed design stage of the project.

Overall, this is a very well compiled document, and no comments are raised.

Kind Regards
Lauren

Lauren Vallejo
Project Interface - Sydney Metro

E Lauren.Vallejo@penrith.city
T +61247327462 | F | M +61439608010
PO Box 60, PENRITH NSW 2751
www.visitpenrith.com.au
www.penrithcity.nsw.gov.au

PENRITH
CITY COUNCIL

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Annexure C Liverpool City Council Consultation Evidence

Table 6: Consultation Log

In/out	Date and time	Method of contact	Details of contact
Out	23-May-22, 3:27pm	Email	Subject Documents provided to stakeholder
Out	20-Jul-22, 3:56pm	Email	Request for comments or provide confirmation of no comments
Out	22-Jul-22, 2:15pm	Phone	Request for comments or provide confirmation of no comments
Out	29-Jul-22, 9:16am	Phone	Request for comments or provide confirmation of no comments
Out	4-Aug-22, 8:48am	Email	Request for comments or provide confirmation of no comments
Out	5-Aug-22, 9:15am	Phone	Request for comments or provide confirmation of no comments
Out	23-Aug-22, 3:17pm	Email	Correspondence advising Liverpool City Council that the Subject Documents will be finalised on 25-Aug-2022.

From: Billings, Mathew <Mathew.Billings@sclww.com.au>
Sent: Monday, 23 May 2022 3:27 PM

1

To: Peter Nelson <NelsonP@liverpool.nsw.gov.au>; Stella Qu <QuS@liverpool.nsw.gov.au>
Cc: Denise Corish <denise.corish@treoenvironment.com>; Cosier, Joshua <Joshua.Cosier@cpbcon.com.au>; kate.o'connell@transport.nsw.gov.au; Raju Divakarla <Raju.Divakarla@transport.nsw.gov.au>; Megan.Mckay3@transport.nsw.gov.au; Graham.Knox5@transport.nsw.gov.au
Subject: WSASBT Works . CSSI 15001 Documents for consultation with Liverpool Council. SSD1-25/2020.

Dear Peter

The documents listed below are being issued from The WSASBT Works Contractor to Liverpool City Council for consultation.

The documents have been drafted to meet requirement of Sydney Metro Western Sydney Airport-SSI 1005 and associated contract requirements.

Issue of the Plans for consultation addresses Condition of Approval (CoA) C5
Issue of Monitoring programs for consultation addresses CoA C13

- *SBT NSW Construction Noise and Vibration Mgt Sub-Plan_Rev A (includes monitoring program) (CoA C5 and C13)*
- *SBT NSW Flora and Fauna Management Plan_Rev A (CoA C5)*
- *Air Quality management and monitoring procedure (CoA C13)*

Please provide all feedback on the documents using the comments register (template attached).
Please return the comments register to me on or before COB 17/06/2022.

If you have any questions during the consultation period please do not hesitate to contact me directly.

Note.
SBT NSW Soil and Water Management Sub-Plan_Rev A (included monitoring program) (CoA C5 and C13) will follow under separate cover this week.

Regards

Mathew Billings
Approvals, Environment and Sustainability Manager
Sydney Metro Western Sydney Airport
Station Boxes and Tunnelling Works

Denise Corish

From:	Denise Corish
Sent:	Wednesday, 20 July 2022 3:56 PM
To:	nelsonp@liverpool.nsw.gov.au; 'QuS@liverpool.nsw.gov.au'
Cc:	joshua.cosier@cpbcon.com.au
Subject:	FW: WSASBT Works . CSSI 15001 Documents for consultation with Liverpool Council. SSD1-25/2020.
Attachments:	SBT NSW Construction Noise and Vibration Mgt Sub-Plan_Rev A_Reduced.pdf; Air quality management and monitoring procedure.pdf; stakholder consultation comments register Template LCC.docx; SBT NSW Flora and Fauna Management Plan_Rev A for consultation_reduced.pdf; CSSI 10051 Sydney Metro Western Sydney Airport - Substation Boxes and Tunnelling (SSD1-25/2020) - LCC Consultation

Hi Peter and Stella,
On behalf of CPB Contractors and Ghella JV, I refer to the emails below and attached which provided the following documents to Liverpool City Council for consultation.

- *SBT NSW Construction Noise and Vibration Mgt Sub-Plan_Rev A (includes monitoring program) (CoA C5 and C13) (attached)*
- *SBT NSW Flora and Fauna Management Plan_Rev A (CoA C5) (attached)*
- *Air Quality management and monitoring procedure (CoA C13) (attached)*
- *SBT NSW Soil and Water Management Sub-Plan_Rev A (including the Surface Water Quality Monitoring Program, Rev B) (Condition CoA C5 and C13) – accessible from the following link* https://wetransfer.com/downloads/94a5c947d2195dd0096502f2077ecc0220220720055346/46654ddc4260e33050d93c2821ed151d20220720055406/2b4a39

The extended consultation period for the management plans and monitoring programs was completed on **27 Jun 2022**. Would it be possible for the Council to provide any comments on the documents at the earliest or provide confirmation of no comments?

Thanks in advance,
Denise

Denise Corish
Manager, Environmental Performance and Assurance

RE: WSASBT Works . CSSI 15001 Documents for consultation with Liverpool Council. ...

Reply | Reply All | Forward | ...

DC
Denise Corish
To nelsonp@liverpool.nsw.gov.au; QuS@liverpool.nsw.gov.au
Cc joshua.cosier@cpbcon.com.au

Thu 4/08/2022 8:48 AM

Hi Peter,
Further to our discussions on 22 July 2022 and 29 July 2022, could I trouble you to confirm whether Council has any comments on the following plans that were submitted to Council for consultation on 23 May 2022:

- *SBT NSW Construction Noise and Vibration Mgt Sub-Plan_Rev A (includes monitoring program) (CoA C5 and C13)*
- *Air Quality management and monitoring procedure (CoA C13)*
- *SBT NSW Soil and Water Management Sub-Plan_Rev A (including the Surface Water Quality Monitoring Program, Rev B) (Condition CoA C5 and C13)*

As discussed, it is a requirement of the Planning Approval that we consult with Council on the above documents. Any assistance greatly appreciated to enable the project to complete the pre-construction compliance obligations.

Kind regards,
Denise

treo

Denise Corish
Manager, Environmental Performance and Assurance

RE: WSASBT Works . CSSI 15001 Documents for consultation with Liverpool Council. SS...

Denise Corish
To nelsonp@liverpool.nsw.gov.au; QuS@liverpool.nsw.gov.au
Cc joshua.cosier@cpbcon.com.au; Mitchell, Stephan; Mitchell, Stephan; Fuda, Emily
Tue 23/08/2022 3:17 PM

Hi Peter,
On behalf of CPB Contractors and Ghella JV, please note that the following plans for the Station Boxes and Tunnelling Works (Sydney Metro Western Sydney Airport) will be finalised on 25 August 2022.

- *SBT NSW Construction Noise and Vibration Mgt Sub-Plan_Rev A (includes monitoring program) (CoA C5 and C13)*
- *Air Quality management and monitoring procedure (CoA C13)*
- *SBT NSW Soil and Water Management Sub-Plan_Rev A (including the Surface Water Quality Monitoring Program, Rev B) (Condition CoA C5 and C13)*

Kind regards,
Denise

Denise Corish
Manager, Environmental Performance and Assurance

M: 0448 039 552
78 Denison Street
Bondi Junction NSW 2022
denise.corish@treoenvironment.com
www.treoenvironment.com

Annexure D DPE Water Consultation Evidence

Table 7: Consultation Log

In/out	Date and time	Method of contact	Details of contact
Out	26-May-22, 4:56pm	Email	Subject Documents provided to stakeholder
In	5-Jul-22, 3:10pm	Email and letter	Stakeholder confirmed no issues with the Subject Documents.

From: Denise Corish <denise.corish@treoenvironment.com>
Sent: Thursday, 26 May 2022 4:56 PM
To: Luke McIver <luke.mciver@dpie.nsw.gov.au>
Cc: Mathew Billings <Mathew.Billings@cpbcon.com.au>; joshua.cosier@cpbcon.com.au
Subject: CSSI 10051 Sydney Metro Western Sydney Airport - Substation Boxes and Tunnelling (SSD1-25/2020) - DPE Water Consultation

Dear Luke
On behalf of CPB Contractors and Ghella JV, the documents listed below are being issued from the Sydney Metro Western Sydney Airport Substation Boxes and Tunnelling (SBT) Contractor to DPE Water for consultation. Completion of the comments register (available in the Dropbox) or confirmation of no comments is requested by **21 June 2022**.

- *Surface Water Quality Monitoring Program, Rev B (Condition CoA C5 and C13) (Annexure B of the Soil and Water Management Sub-Plan)*
- *Groundwater Monitoring Program, Rev D (Annexure A of the Soil and Water Management Sub-Plan)*

The documents are accessible from the following Dropbox: *https://www.dropbox.com/scl/fo/wqwi97j0srwer5dwtrwm5/h?dl=0&rlkey=z99jt0zzua43aop3etw228fab*

The documents have been drafted to meet requirement of Sydney Metro Western Sydney Airport SSI 10051 Planning Approval and associated contract requirements. Sub-plans are issued for consultation in accordance with Condition of Approval (CoA) C5 and monitoring program are issued for consultation in accordance with CoA C13.

Please note that consultation with DPE Water is not required with respect to the Soil and Water Management Sub-Plan. This document is submitted for information only.

If you have any questions during the consultation period, please do not hesitate to contact me directly.

Kind regards,
Denise

Denise Corish
Manager, Environmental Performance and Assurance

From: DPIE Water Assessments Mailbox
Sent: Tuesday, 5 July 2022 3:10 PM
To: Denise Corish <denise.corish@treoenvironment.com>
Subject: RE: CSSI 10051 Sydney Metro Western Sydney Airport - Substation Boxes and Tunnelling (SSD1-25/2020) - DPE Water Consultation

Hi Denise,

Please see attached advice from DPE Water on this matter.

Apologies for the lateness.

Regards,

Judy Court
Assistant Project Officer
Water Group
Department of Planning and Environment

T 02 9842 8126 | **E** judy.court@dpie.nsw.gov.au

www.dpie.nsw.gov.au
4 Parramatta Square
12 Darcy St
Parramatta, NSW 2150

Working days Monday to Thursday.

Department of Planning and Environment

Our ref: OUT22/7064

Denise Corish
Manager, Environmental Performance and Assurance
Treo Environment

Email: denise.corish@treoenvironment.com

5 July 2022

Subject: **Sydney Metro- Western Sydney Airport - Substation Boxes and Tunnelling Monitoring Plans (SSI 10051)**

Dear Denise,

I refer to your request for advice sent on 26 May 2022 to the Department of Planning and Environment (DPE) Water about the above matter.

The Department of Planning and Environment (DPE)- Water finds the Groundwater Monitoring Plan and Surface Water Quality Monitoring Plan within the Soil and Water Management Sub-Plan to be comprehensive and reasonable. DPE Water has no further recommendations or comments at this time.

Should you have any further queries in relation to this submission please do not hesitate to contact DPE Water Assessments at water.assessments@dpie.nsw.gov.au

Yours sincerely,

E Rogers

Liz Rogers
Manager, Assessments, Knowledge Division
Department of Planning and Environment: Water

Annexure E EPA Consultation Evidence

Table 8: Consultation Log

In/out	Date and time	Method of contact	Details of contact
Out	26-May-22, 4:56pm	Email	Subject Documents provided to stakeholder
Out	20-Jul-22, 3:27pm	Email	Request for comments or provide confirmation of no comments
Out	20-Jul-22, 3:36pm	Email	Request for comments or provide confirmation of no comments
In	29-Jul-22, 4:32pm	Email	Stakeholder confirmed no issues with the Subject Documents.

From: Denise Corish
Sent: Thursday, 26 May 2022 4:56 PM
To: 'afnan.fazli@epa.nsw.gov.au' <afnan.fazli@epa.nsw.gov.au>
Cc: Mathew Billings <Mathew.Billings@cpbcon.com.au>; joshua.cosier@cpbcon.com.au
Subject: CSSI 10051 Sydney Metro Western Sydney Airport - Substation Boxes and Tunnelling (SSD1-25/2020) - EPA Consultation

Dear Afnan
On behalf of CPB Contractors and Ghella JV, the documents listed below are being issued from the Sydney Metro Western Sydney Airport Substation Boxes and Tunnelling (SBT) Contractor to the EPA for consultation. Completion of the comments register (available in the Dropbox) or confirmation of no comments is requested by **21 June 2022**.

- *SBT NSW Surface Water Quality Monitoring Program, Rev B (Condition CoA C5 and C13)*
- *SBT NSW Air Quality Management and Monitoring Procedure (Rev 3)*

The above documents are accessible from the following Dropbox*:*
https://www.dropbox.com/scl/fo/i6fvw0ulrbqzyxsy1xvrc/h?dl=0&rlkey=9fy216snatiharc1db6qm4jen

The documents have been drafted to meet requirement of Sydney Metro Western Sydney Airport SSI 10051 Planning Approval and associated contract requirements. Sub-plans are issued for consultation in accordance with Condition of Approval (CoA) C5 and monitoring program are issued for consultation in accordance with CoA C13.

Please note that consultation with the EPA is not required with respect to the Soil and Water Management Sub-Plan and the Groundwater Monitoring Program (Annexure A of the Sub-Plan). This document is submitted for information only.

If you have any questions during the consultation period, please do not hesitate to contact me directly.

Kind regards,
Denise

RE: CSSI 10051 Sydney Metro Western Sydney Airport - Substation Boxes and ...

DC
Denise Corish
To 'afnan.fazli@epa.nsw.gov.au'
Cc 'joshua.cosier@cpbcon.com.au'

Wed 3:27 PM

Good afternoon Afnan
The extended consultation period for the Sydney Metro Western Sydney Airport Substation Boxes and Tunnelling (SBT) project management plans was completed on **21 Jun 2022**. Would it be possible for the EPA to provide any comments on the following documents at the earliest or provide confirmation of no comments?

- SBT NSW Surface Water Quality Monitoring Program, Rev B (Condition CoA C5 and C13)
- SBT NSW Air Quality Management and Monitoring Procedure (Rev 3)

Kind regards,
Denise

treo

Denise Corish
Manager, Environmental Performance and Assurance

FW: CSSI 10051 Sydney Metro Western Sydney Airport - Substation Boxes and...

DC

Denise Corish

To Jacqueline.Ingham@epa.nsw.gov.au

Wed 3:36 PM

Dear Jacqueline,

I understand that Afnan is currently on leave until 1 August. On behalf of CPB Contractors and Ghella JV (the Sydney Metro Western Sydney Airport Substation Boxes and Tunnelling (SBT) Contractor), the documents listed below were issued to the EPA for consultation on **26 May 2022**.

- *SBT NSW Surface Water Quality Monitoring Program, Rev B (Condition CoA C5 and C13)*
- *SBT NSW Air Quality Management and Monitoring Procedure (Rev 3)*

Would it be possible for the EPA to provide any comments on the following documents at the earliest or provide confirmation of no comments? I have included the link to the documents below for your reference.
https://we.tl/t-9erBwMedg4

Kind regards,
Denise

treo environment

Denise Corish
Manager, Environmental Performance and Assurance

RE: HPE CM: FW: CSSI 10051 Sydney Metro Western Sydney Airport - Sub...

NT Natalie Tan <natalie.tan@epa.nsw.gov.au>
To Denise Corish
Cc Jacqueline Ingham; Afnan Fazli

4:32 PM

You replied to this message on 29/07/2022 4:35 PM.

Hi Denise,

Thanks for the invite to comment on the SBT surface water quality monitoring program and air quality management and monitoring procedure, prepared in relation to EPL 21672 for the Sydney Metro Western Sydney Airport - Substation Boxes and Tunnelling package.

The EPA generally does not review, approve or endorse monitoring programs or management procedures, as the role of the EPA is to set objectives for environmental protection and management and not to be directly involved in the development of strategies to comply with such objectives. The licensee should ensure that the monitoring program proposed is in line with the conditions of the licence to ensure ongoing compliance.

Please note that the impact of noise and vibration to protect the amenity and wellbeing of the community must be managed. Potential impacts should be minimised using relevant guidance material and the implementation of all feasible and reasonable mitigation measures.

Please see www.epa.nsw.gov.au for further information relating to the above to guide the assessment of these matters.

If you have any questions about this request, please contact me on 0458 273 053 or via email, ensuring to copy in info@epa.nsw.gov.au.

Kind regards,

Natalie Tan
Operations Officer
Regulatory Operations Metro West
NSW Environment Protection Authority
D (02) 9585 6619 **M** 0458 273 053

Annexure E Environmental Representative Endorsement