

Annual Water Quality Monitoring Report

Pacific Highway Upgrade: Woolgoolga to Ballina
Sections 3 to 11: July 2021 to June 2022

Transport for New South Wales | September 2023

UPR	Description	Date Issued	Issued By
2683-1259	1 st issue – draft for review	20/08/2022	Patrick Sloan
2683-1262	2 nd issue	23/11/2022	Patrick Sloan
2683-1265	3 rd issue	12/09/2023	Patrick Sloan

Table of Contents

1.	Introduction	1
1.1	Background	1
1.2	Overview of Monitoring Program	1
1.2.1	Objectives	1
2.	Monitoring Methodology	2
2.1	Surface Water Quality	2
2.1.1	Monitoring Locations	2
2.1.2	Sampling Regime and Parameters	2
2.1.3	Sample and Data Collection	3
2.2	Groundwater Quality	3
2.2.1	Monitoring Locations	3
2.2.2	Sampling Regime and Parameters	3
2.2.3	Sample and Data Collection	3
2.3	Groundwater Levels	4
2.3.1	Monitoring Locations	4
2.3.2	Sampling Regime	4
2.3.3	Sample and Data Collection	4
3.	Results	5
3.1	Climatic Conditions	5
3.2	Data Analysis Approach	7
3.2.1	Surface Water Quality	7
3.2.2	Groundwater Quality	8
3.2.3	Groundwater Levels	9
3.3	Surface Water Quality	9
3.3.1	Discussion	10
3.4	Groundwater Quality	14
3.4.1	Discussion	14
3.5	Groundwater Levels	16
3.5.1	Discussion	16
4.	Project Response to Results	17
5.	Recommendations	18
5.1	Monitoring Program	18

Tables

<u>Table 2.1</u>	<u>Surface Water Sampling Parameters</u>	<u>2</u>
<u>Table 2.2</u>	<u>Groundwater Quality Sampling Parameters</u>	<u>3</u>
<u>Table 3.1</u>	<u>Reporting Period Total Rainfall and Average Annual Rainfall</u>	<u>7</u>
<u>Table 3.2</u>	<u>Tolerances for Comparing Upstream and Downstream Results</u>	<u>8</u>

Figures

<u>Figure 3.1</u>	<u>Ballina monthly rainfall over the reporting period versus long-term average</u>	<u>5</u>
<u>Figure 3.2</u>	<u>Evans Head monthly rainfall over the reporting period versus long-term average</u>	<u>6</u>
<u>Figure 3.3</u>	<u>Yamba monthly rainfall over the reporting period versus long-term average</u>	<u>6</u>
<u>Figure 3.4</u>	<u>Grafton monthly rainfall over the reporting period versus long-term average</u>	<u>7</u>

Appendices

<u>Appendix A</u>	<u>Monitoring Locations Maps</u>
<u>Appendix B</u>	<u>Surface Water Quality: Results of Interest</u>
<u>Appendix C</u>	<u>Surface Water Quality: Data</u>
<u>Appendix D</u>	<u>Groundwater Quality: Results of Interest</u>
<u>Appendix E</u>	<u>Groundwater Quality: Data</u>
<u>Appendix F</u>	<u>Groundwater Levels: Results of Interest</u>
<u>Appendix G</u>	<u>Groundwater Levels: Charts</u>

Executive Summary

This is the sixth annual water monitoring report for Sections 3 to 11 of the Woolgoolga to Ballina (W2B) Pacific Highway upgrade. This report covers the second year of project operation. The reporting period for this annual report is 1 July 2021 to 30 June 2022. There were no major construction activities within the project area during the reporting period as the project is now within its operational phase and forms part of the wider NSW road network.

The water quality monitoring program is described in the *Pacific Highway Upgrade – Woolgoolga to Ballina Sections 3 to 11: Water Quality Monitoring Program* (WQMP) (dated 26 June 2019, GeoLINK ref: 2476-1026). The purpose of the WQMP is to monitor the construction and operation impacts of the highway upgrade on surface water bodies and groundwater resources, and to provide input into the environmental management of the project.

As outlined in previous annual monitoring reports, a 'result of interest' is a result that has potentially been influenced by project activities and has been investigated.

The WQMP proposes that water quality monitoring results be assessed by comparing sampling results to the corresponding 80th percentile (P80) figure and/or 20th percentile (P20) figure (as relevant) from the baseline data. The P80 is applicable to parameters where high values are potentially an issue (e.g., turbidity), while the P20 is applicable to parameters where low values are potentially an issue (e.g., dissolved oxygen), and both figures are relevant for parameters where either a high value or a low value are potentially an issue (e.g., pH).

For surface water monitoring, where a downstream result is greater than the P80 baseline value (or is less than the P20 baseline value, where relevant) comparison with the upstream result collected at the same time is undertaken to determine whether it is a result of interest. During the reporting period, results of interest were identified at all sites.

For groundwater quality monitoring, bores have been classified as either 'up gradient' or 'down gradient'. For a pair of bores, the down gradient bore is the one that typically has the lower groundwater level, indicating that the direction of groundwater flow is from the up gradient bore to the down gradient bore. Where the down gradient result is greater than the P80 value (or is less than the P20 value, where relevant), it is a result of interest. During the reporting period, results of interest were identified at many sites.

For groundwater level monitoring, the operation phase groundwater level data has been assessed by comparing the difference in groundwater level between a pair of bores to the P80 of the difference in groundwater level between the same pair of bores during the pre-construction monitoring period. During the reporting period, results of interest were identified at some sites.

Updated monitoring data is provided to Transport for NSW (TfNSW) on a regular basis. The project responds to the water monitoring results as follows:

1. The water monitoring data is reviewed, with particular focus on the results of interest that have been identified.
2. The results assist with setting the focus for the project's periodic environmental management inspections, noting it is in the operational phase.
3. During these inspections, any potential environmental actions are identified (e.g., maintenance, replacement, or upgrade).
4. The aforementioned actions are tracked and implemented.

1. Introduction

1.1 Background

This is the sixth annual water monitoring report for Sections 3 to 11 of the Woolgoolga to Ballina (W2B) Pacific Highway upgrade. The reporting period for this report is 1 July 2021 to 30 June 2022. This is the second monitoring report covering the operational phase of the project. There were no major construction activities undertaken within the reporting period, and the highway is now an operational asset as part of the wider NSW road network. The operational highway includes a range of permanent water quality control measures including water quality swales, basins, and rehabilitated landscape to reduce potential impacts on the surrounding environment during the operational phase.

1.2 Overview of Monitoring Program

The water quality monitoring program is described in the *Pacific Highway Upgrade – Woolgoolga to Ballina Sections 3 to 11: Water Quality Monitoring Program* (WQMP) (dated 26 June 2019, GeoLINK ref: 2476-1026).

1.2.1 Objectives

The purpose of the WQMP is to monitor the construction and operation impacts of the highway upgrade on surface water bodies and groundwater resources and provide input to the environmental management of the project.

The key surface water quality objective of the W2B project is to protect downstream environments from the potential impacts of surface runoff during the construction and operational phases of the project (RMS, Aurecon, SKM, 2012a). Similarly, the key groundwater objective of the W2B project is to protect environmental receivers of groundwater flows and groundwater users from the potential impacts on groundwater levels and quality during the construction and operational phases of the project (RMS, Aurecon, SKM, 2012b).

The outcomes of the WQMP will assist with achieving water quality and hydrology related management objectives for the W2B project including:

- Mitigating impacts to surface water quality in order to protect aquatic ecology and ecosystem characteristics in adjacent catchments.
- Mitigating impacts to groundwater hydrology in order to protect licensed bores and dams, water bodies and groundwater dependant ecosystems.

2. Monitoring Methodology

2.1 Surface Water Quality

2.1.1 Monitoring Locations

The surface water monitoring locations are described in Section 2.1 of the WQMP. Maps of the surface water monitoring locations are presented in **Appendix A**.

There were no changes to the monitoring locations during the reporting period.

2.1.2 Sampling Regime and Parameters

As per Section 4.2.2.1 of the WQMP, the required frequency of sampling and the sampling parameters are as follows:

- One wet event sampling round per quarter:
 - Type A parameters every quarter (refer to **Table 2.1**); plus
 - Type B parameters (refer to **Table 2.1**) every second quarter.
- One dry event sampling round every six months (two rounds in the first year of operation):
 - Type A and Type B parameters.

Wet events are defined as 15 mm or more of rain within 24 hours. Wet event sampling is to be undertaken within 48 hours of the rain event.

Some sites were not monitored during some monitoring rounds because they either could not be accessed or had insufficient water. These instances are noted in the results spreadsheet presented in **Appendix C**.

Table 2.1 Surface Water Sampling Parameters

Parameter	Type A Parameters	Type B Parameters
pH (measured in the field)	X	
Temperature (measured in the field)	X	
Electrical Conductivity (EC) (measured in the field)	X	
Dissolved Oxygen (DO) (measured in the field)	X	
Turbidity (measured in the field)	X	
Total Suspended Solids (TSS)		X
Total Oils and Grease (include as Type A parameter if oil/grease is visible)	*	X
Total Phosphorous (TP), Total Nitrogen (TN)		X

Parameter	Type A Parameters	Type B Parameters
Total Recoverable Hydrocarbons (TRH) (include as Type A parameter if oil/grease is visible)	*	X
Heavy Metals (Total): Aluminium, Arsenic, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc		X

* Note: Oils and grease and TRH to be analysed as Type A parameters if oil/grease is visible

2.1.3 Sample and Data Collection

The collection of in-situ water quality data and the collection of water samples for laboratory analysis were undertaken in accordance with the methodology described in Sections 5.1 and 5.2 of the WQMP.

2.2 Groundwater Quality

2.2.1 Monitoring Locations

The groundwater quality monitoring locations are described in Section 2.2 of the WQMP. Maps of the groundwater monitoring locations are presented in **Appendix A**.

There were no changes to the monitoring locations during the reporting period.

2.2.2 Sampling Regime and Parameters

Sampling parameters are as per **Table 2.2** overleaf. As per Section 4.3.2.2 of the WQMP, sampling over the first year of the operational phase comprised of six-monthly monitoring of both Type A and B parameters.

Some bores were not monitored during some monitoring rounds due to insufficient water. These instances are noted in the results spreadsheet presented in **Appendix E**.

2.2.3 Sample and Data Collection

The collection of in-situ water quality data was undertaken in accordance with the methodology described in Sections 5.1 and 5.3 of the WQMP. A passive sampling approach was used to collect groundwater samples.

Table 2.2 Groundwater Quality Sampling Parameters

Parameter Group	Parameter	Type A Parameters (Field Analysis)	Type B Parameters (Laboratory Analysis)
	pH	X	

Parameter Group	Parameter	Type A Parameters (Field Analysis)	Type B Parameters (Laboratory Analysis)
Physical and Chemical Properties	Temperature	X	
	Electrical Conductivity (EC)	X	
Hydrocarbons	Total Recoverable Hydrocarbons (TRH)		X
Nutrients	Total Phosphorous, Total Nitrogen		X
Major Cations	Sodium (Na+), Potassium (K+), Calcium (Ca2+), Magnesium (Mg2+)		X
Major Anions	Chloride (Cl-), Sulfate (SO42-), Bicarbonate (HCO3-)		X
Heavy Metals	Aluminium, Cadmium, Copper, Lead, Zinc		X

2.3 Groundwater Levels

2.3.1 Monitoring Locations

The groundwater level monitoring locations are described in Section 2.2 of the WQMP. Maps of the groundwater monitoring locations are presented in **Appendix A**.

There were no changes to the monitoring locations during the reporting period.

2.3.2 Sampling Regime

As per Section 4.3.1.2 of the WQMP, the automatic water level recorders are required to be downloaded on a quarterly basis with the recorders set to take readings at a maximum of six-hour intervals. Physical measurement of the depth to standing water level is to be taken at the same time as the quarterly download.

The monitoring undertaken during the reporting period complied with the above. Some bores were not monitored during some monitoring rounds due to various reasons, including insufficient water, access constraints and issues with the loggers. These instances are noted in the results spreadsheet presented in **Appendix E**.

2.3.3 Sample and Data Collection

The collection of groundwater level data was undertaken in accordance with the methodology described in Sections 5.1 and 5.3 of the WQMP.

3. Results

3.1 Climatic Conditions

Figure 3.1 to **Figure 3.4** present monthly totals for the reporting period compared to long-term averages (data sourced from BoM website). The recorded rainfall across Sections 3 to 11 of the W2B project during the reporting period varied in comparison with long-term averages.

Significantly higher than average rainfall was experienced between January and March 2022 across all weather stations. Furthermore, the Northern Rivers of NSW region experienced severe flooding events between February and March 2022.

Rainfall totals for the 12 months of the reporting period were significantly higher than the long-term average annual rainfalls (**Table 3.1**).

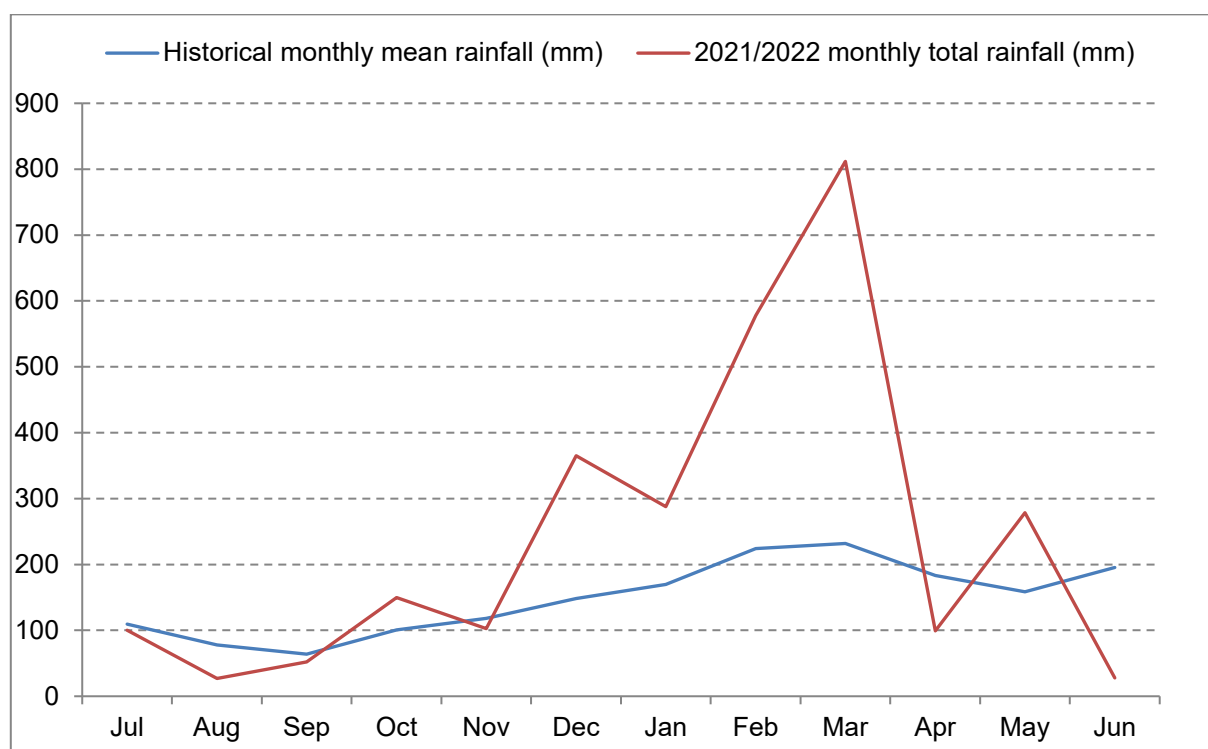


Figure 3.1 Ballina monthly rainfall over the reporting period versus long-term average

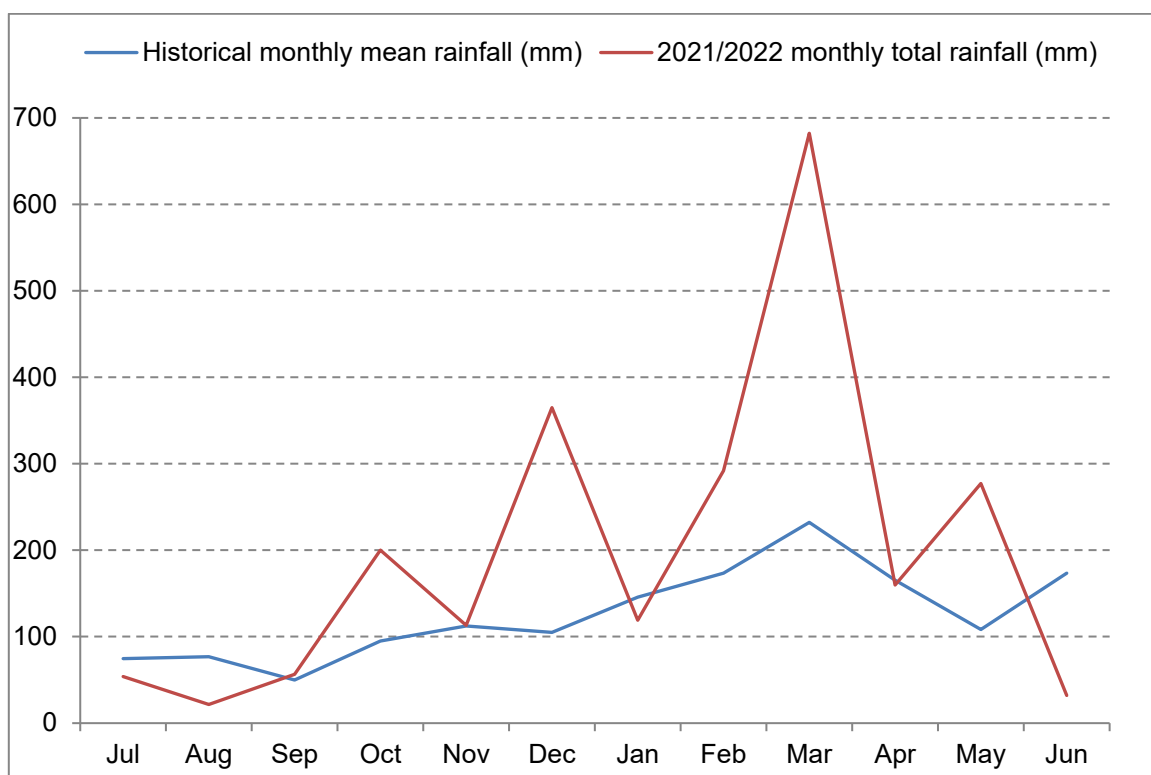


Figure 3.2 Evans Head monthly rainfall over the reporting period versus long-term average
(Note: data set not complete for December 2021 or January 2022)

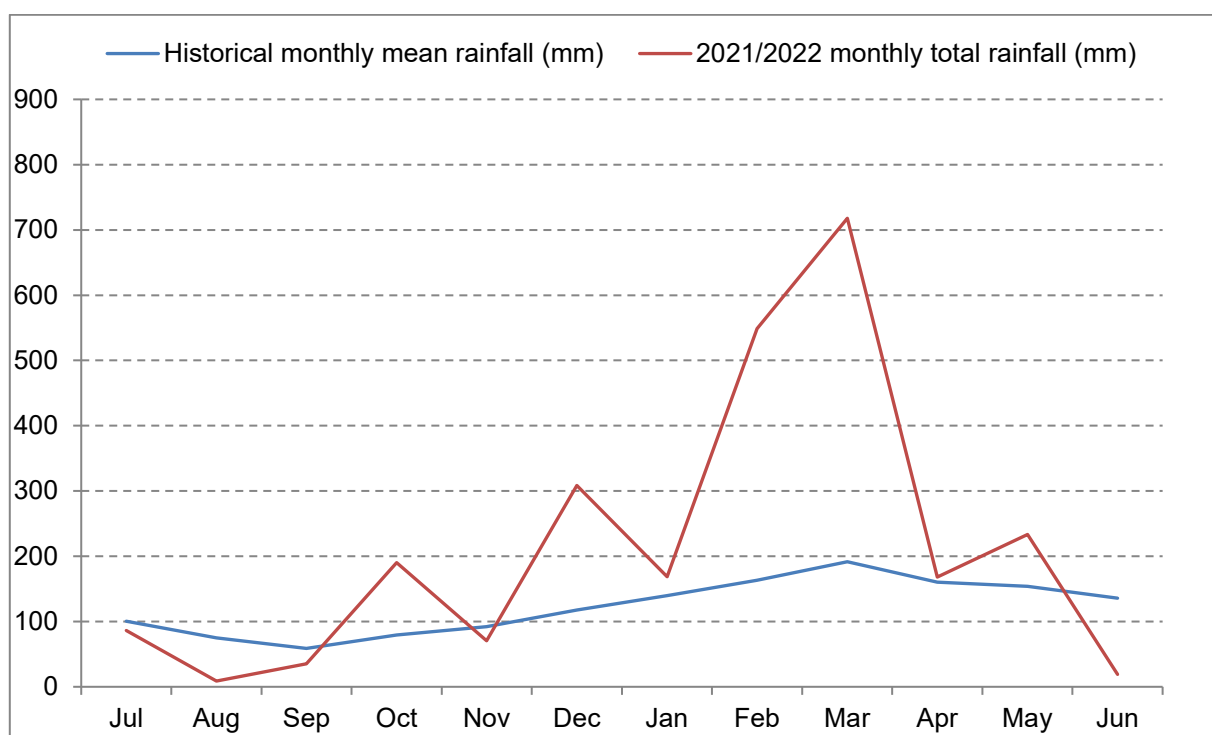


Figure 3.3 Yamba monthly rainfall over the reporting period versus long-term average

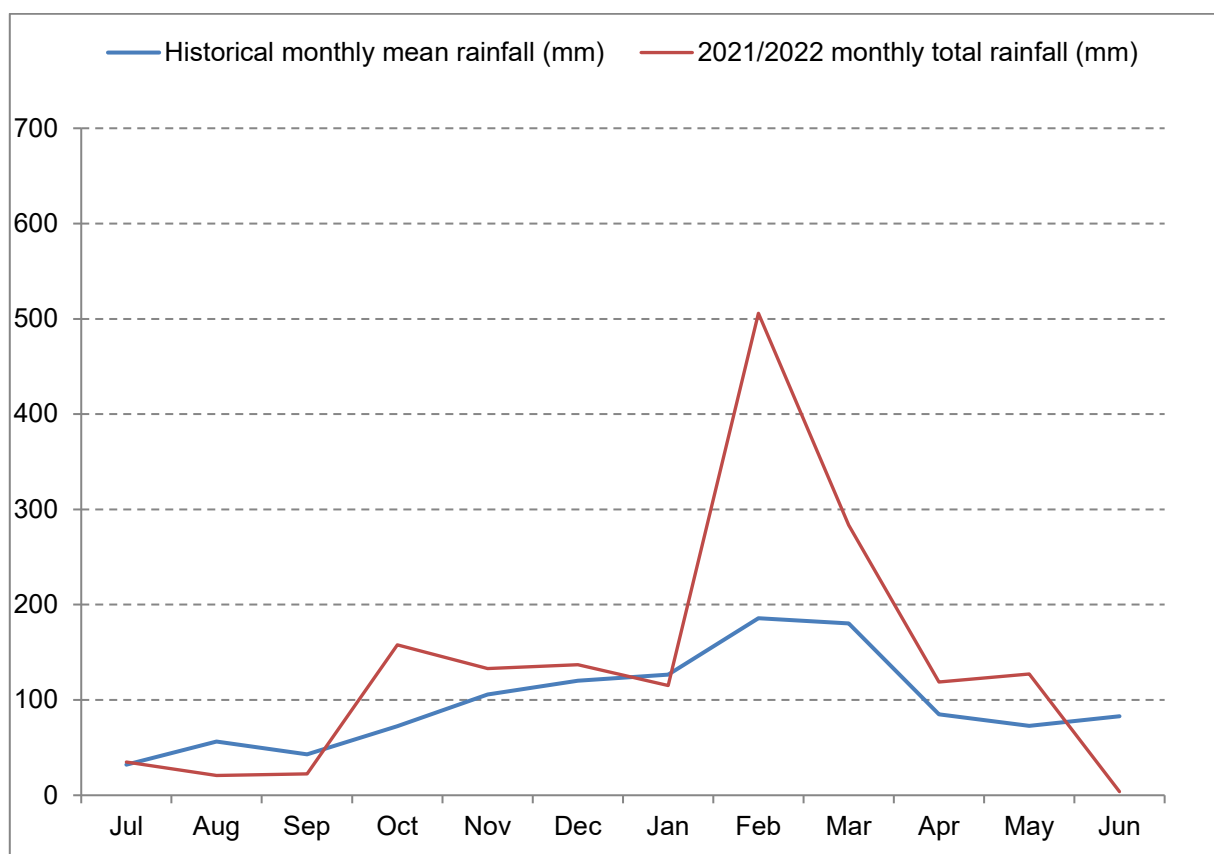


Figure 3.4 Grafton monthly rainfall over the reporting period versus long-term average

Table 3.1 Reporting Period Total Rainfall and Average Annual Rainfall

Station	Long-term average annual rainfall (mm)	Rainfall for 2021-2022 reporting period (mm)
Ballina	1,781	2,880
Evans Head	1,512	2,372*
Yamba	1,468	2,556
Grafton (Airport)	1,164	1,660

* Data set not complete for December 2021 or January 2022

3.2 Data Analysis Approach

3.2.1 Surface Water Quality

The WQMP proposes that surface water quality monitoring results be assessed by comparing sampling results to the corresponding 80th percentile (P80) figure and/or 20th percentile (P20) figure (as relevant) from the baseline data.

The P80 is applicable to parameters where high values are potentially an issue (e.g., turbidity), while the P20 is applicable to parameters where low values are potentially an issue (e.g., dissolved oxygen), and

both figures are relevant for parameters where either a high value or a low value are potentially an issue (e.g., pH).

Where a downstream result is greater than the P80 value (or is less than the P20 value, where relevant) then further comparison with the upstream result collected at the same time is undertaken. Where the downstream result is also greater than (or less than, where relevant) the corresponding upstream result by more than the tolerance listed in **Table 3.2**, it is considered to be a 'result of interest'. That is, the result has potentially been influenced by project activities and further investigation is undertaken.

Where the downstream result exceeds the upstream result by less than the tolerance listed in **Table 3.2**, it is considered unlikely to have been influenced by project activities. The tolerances listed in **Table 3.2** take into consideration spatial and temporal variation that is observed when taking water quality measurements in waterways that typically exhibit significant variance within short distances and timeframes. The tolerances also account for instrument error ranges.

Table 3.2 Tolerances for Comparing Upstream and Downstream Results

Parameter	Downstream result is considered to be a 'result of interest' if it exceeds the upstream result by more than:
Electrical Conductivity	The standard deviation from the baseline data
pH	The standard deviation from the baseline data
Dissolved Oxygen	0.5 mg/L
Turbidity	10 NTU
Total Suspended Solids	10 mg/L
Oil and grease	2 mg/L
Total Phosphorous	0.02 mg/L
Total Nitrogen	0.2 mg/L

The original baseline data set is the pre-construction data collected between February and December 2013. As per Section 7.1.2 of the WQMP, the baseline data is supplemented with the data collected from upstream monitoring sites during the construction and operational phases of the project. The upstream monitoring sites represent sites not impacted by the highway upgrade and therefore represent control sites. This process provides a more robust set of baseline data over the course of the project.

3.2.2 Groundwater Quality

The WQMP proposes that groundwater quality monitoring results be assessed using comparisons to the P80 and P20 values from the baseline data, similar to the surface water quality approach described above.

The baseline data set is the pre-construction data collected between February 2013 and January 2014.

During baseline monitoring in Sections 3 to 6, the bores were monitored for the in-situ parameters of pH, EC and temperature. In Sections 7 to 11, the bores were monitored for pH only, except for three bores

in Section 8 (GWB8-15, GWB8-16 and GWB8-17), which were monitored for pH, EC, TDS, hydrocarbons, nutrients, major cations and anions, and heavy metals.

Because there is no baseline data for some parameters and only limited baseline data for the remainder, each bore has been classified as either 'up gradient' or 'down gradient'. For a pair of bores, the 'down gradient' bore is the one that typically has the lower groundwater level, indicating that the direction of groundwater flow is from the 'up gradient' bore to the 'down gradient' bore. P80 values (and P20 values, where relevant) have been calculated using any available pre-construction data, as well as the construction and operational phase data for the 'up gradient' bore. These P80 and P20 values are then used to assess the groundwater quality results for the corresponding 'down gradient' bore.

Where the down gradient result is greater than the P80 value (or is less than the P20 value, where relevant), it is considered to be a 'result of interest'. That is, the result has potentially been influenced by project activities and further investigation is undertaken.

3.2.3 Groundwater Levels

The WQMP proposes that the operation phase groundwater level data be assessed by comparing the difference in groundwater level between a pair of bores to the P80 of the difference in groundwater level between the same pair of bores during the pre-construction monitoring period. This has been implemented in the following manner:

- The difference in the groundwater level between a pair of bores is calculated at each time interval for the pre-construction monitoring period.
- The P80 of these groundwater level differences is calculated to determine the baseline P80.
- During the operation phase, the difference in the groundwater level between a pair of bores is calculated at each time interval.
- If the difference in the groundwater level exceeds the baseline P80, it is considered to be a 'result of interest'. That is, the result has potentially been influenced by project activities and further investigation is undertaken.

It is noted that the groundwater levels could be impacted by other 'natural' factors, such as climatic conditions that are different to those experienced during the baseline period.

3.3 Surface Water Quality

The results from the surface water quality monitoring are progressively provided to Transport for NSW (TfNSW) during the monitoring program. Results of interest are highlighted in bold red font in the spreadsheet and a tabulated summary of these results is also provided at the same time. These results trigger a review of site activities and potentially further investigation, as outlined in the WQMP.

A compilation of the results of interest for the reporting period is provided in **Appendix B** and a snapshot of the surface water quality monitoring results spreadsheet (as at July 2022) is provided in **Appendix C**.

The results of interest listed in **Appendix B** will not necessarily match the results that are highlighted in bold red font in the spreadsheet in **Appendix C**. This is because the P80 and P20 values are progressively updated as additional upstream data is collected and added to the baseline data set (refer to **Section 3.2.1** for discussion). The results of interest listed in **Appendix B** were determined based on

the P80 and P20 values that were current at the time that the result was obtained, whereas the spreadsheet in **Appendix C** contains the P80 and P20 values as at 04 July 2022.

3.3.1 Discussion

All surface water sites had results of interest for at least one parameter during one or more monitoring rounds. Some results of interest may have been attributable to the project. The following observations can be made:

- **Rainfall:** As described in **Section 3.1**, monthly rainfall varied across the reporting period in comparison to the long-term averages. Despite the higher-than-average rainfall across the reporting period, there were several cases where water quality was tested and sampled at a downstream site that was not visibly connected by continuous water to the upstream site. Some waterways were a series of isolated pools and monitoring was undertaken within a pool of water that did not appear to be connected with the upstream site. These instances are noted in the field notes in **Appendix B** and **Appendix C**. As per **Section 4**, any assessment of the adequacy of environmental management controls should consider the lack of connectivity at the time of the monitoring event.
- **Electrical Conductivity (EC):** Aside from the influence of tidal water, EC in a waterway may be influenced by inputs such as fertiliser (i.e., TP and TN concentrations) and soils with high salt content. Fertiliser runoff and erosion associated with the project may cause increases in EC levels at monitoring sites.

Electrical Conductivity results of interest were recorded at most sites on one or more occasions, including during both wet and dry sampling events. Example results of interest include:

- 0.60 mS/cm (P80 = 0.26 mS/cm, upstream = 0.18 mS/cm) at SW3-02 on 04/07/2022 during wet event monitoring
- 7.02 mS/cm (P80 = 4.86 mS/cm) at SW5-11 on 18/11/2021 during dry event monitoring
- 0.10 mS/cm (P80 = 0.39 mS/cm) at SW5-11 on 23/05/2023 during wet event monitoring

No results were found to have a significant variation either well above or well below the statistical range. No clear indication as to the reason for these exceedances was observed during the monitoring event.

Electrical Conductivity results of interest were recorded at some sites on one or more occasions, including during both wet and dry sampling events. While the impacts from the recorded EC levels are considered likely to be negligible, management responses can include a review of the existing measures that relate to the management of erosion and sediment control and the use of fertilisers, should any controls remain or where revegetation works are ongoing.

- **Dissolved Oxygen (DO):** Low DO concentrations in a waterway may be a result of:
 - inputs of tannin leachates (which increases biological oxygen demand);
 - inputs of nutrients (which cause elevated algal growth that in turn depletes DO); or
 - a change in flow regime which can lead to stagnation and in turn depleted DO concentrations.

Another potential cause of low DO concentrations, which is unrelated to project activities, is long periods of floodplain inundation due to flood events. The project area was subjected to several significant regional flooding events during the reporting period, which resulted in significant inundation to the project and surrounding areas, as well as substantial periods of inundation after the peak flood events due to the location on existing floodplains.

Dissolved Oxygen results of interest were recorded at some sites on one or more occasions, including during both wet and dry sampling events. Noteworthy results include:

- 2.55 mg/L (P20 = 5.38 mg/L) at SW5-11 on 11/11/2021 during wet event monitoring
- 3.62 mg/L (P20 = 4.16 mg/L, upstream = 9.61 mg/L) at SW8-06 on 11/11/21 during wet event monitoring
- 2.67 mg/L (P20 = 6.31 mg/L, upstream = 7.22 mg/L) at SW10-06 on 17/05/22 during wet event monitoring

It is noted that all these events were recorded during wet event monitoring. Extensive speculation could be made as to the cause of these events. Given rainfall events typically result in connectivity between the sites and throughout the waterway it is suspected that these issues have arisen from either previously stagnant portions of the waterway or flushing of acid sulfate soils. Other than speculation no clear correlation can be drawn from the information currently available.

Low DO concentrations, especially over a long-term, can result in unacceptable stress to most of the aquatic fauna. Periods of extremely low DO levels typically result in fish kills and significant environmental imbalance. Management responses to low DO concentrations regarding the operation of the project can include a review of:

- management of cleared vegetation and mulch stockpiles (with respect to tannin leachates), where these features are still present within the project site; and
 - maintaining the flow regime of waterways.
- **Turbidity and Total Suspended Solids:** Elevated turbidity and/or suspended solids can result from the direct disturbance and subsequent mobilisation of sediments within waterways as well as inputs of sediment laden run-off during rain. Construction activities including clearing, grubbing and earthworks typically increase the area of exposed soil and, without appropriate management, can lead to erosion and transport of fine material into waterways. During the operational phase, impacts could include the failure of drainage lines or pollution control basins or the lack of sufficient permanent and stable vegetation cover across areas that were exposed during construction.

Turbidity and suspended solids results of interest were recorded at some sites on one or more occasions, including during both wet and dry sampling events. Results of particular note include:

- 107 mg/L (P80 = 25 mg/L, upstream = 1 mg/L) at SW8-08 on 24/11/21 during dry event monitoring
- 100 NTU (P80 = 23 NTU, upstream = 7 NTU) at SW9-01B on 11/11/2021 during wet event monitoring

Inference as to the route course of these results is difficult. Field notes taken at the time do not provide detail sufficient to indicate why these results were high. Management responses listed below should be enacted to ensure that these results are not project related.

Elevated turbidity can attenuate light and subsequently stress photosynthetic aquatic flora. Suspended solids can stress fish via interfering with the function of fish gills and, when suspended solids fall out of suspension, they can smother sessile aquatic biota. Potential management responses to address elevated turbidity/suspended solid concentrations can include:

- ensure revegetation and stabilisation of the project site is progressing well and is effective; and
- review of erosion and sediment controls at relevant sites where revegetation has yet to achieve target ground cover to ensure they are installed in accordance with the Progressive Erosion and Sediment Control Plan and are functioning well, particularly during rainfall.

- **Hydrocarbons (including Oil and Grease):** Hydrocarbons are widely used in construction plant and equipment and in highway traffic vehicles in the form of fuels and oils. Spills and leaks from plant, equipment, and storage vessels and during transport and refuelling or through traffic accidents can lead to contamination of waterways. Run-off from contaminated soil and asphalt works is also a potential pathway for hydrocarbons to enter aquatic systems.

Results of interest for both hydrocarbons and oil and grease were reported at some sites. Results of particular note include:

- 9 mg/L (P80 = 3 mg/L, upstream = 1 mg/L) oil and grease at SW5-05 on 23/05/22 during wet event monitoring
- 310 µg/L (P80 = 100 µg/L, upstream = 100 µg/L) TRH>C16-C34 fraction at SW8-08 on 11/11/2021 during wet event monitoring
- 710 µg/L (P80 = 100 µg/L, upstream = 100 µg/L) TRH>C16-C34 fraction at SW9-01B on 11/11/2021 during wet event monitoring
- 200 µg/L (P80 = 50 µg/L, upstream = 50 µg/L) TRH>C34-C40 fraction at SW9-01B on 11/11/2021 during wet event monitoring
- 12 mg/L (P80 = 3 mg/L, upstream = 7 mg/L) oil and grease at SW9-03 on 20/05/22 during dry event monitoring
- 32 mg/L (P80 = 3 mg/L) oil and grease at GDE-07 on 24/11/21 during dry event monitoring

It should be noted that oil and grease were analysed using a hexane extractable analysis which measures for organic hydrocarbons (vegetable or animal origin) in addition to petroleum hydrocarbons. Potential management responses to elevated hydrocarbon (including oil and grease) results can include:

- review of the project incident register (to determine whether a spill has been reported in the area);
 - review of TfNSW spill and/or accident records;
 - review and audit of spill response procedures;
 - inspections of nearby areas that may be used for the storage or use of hydrocarbons (e.g., site compounds); and
 - inspection of operational pollution containment controls.
- **Nutrients (Total N and Total P):** Nutrients can enter waterways via:
 - soil erosion and off-site movement of eroded soils, particularly soils that have had fertiliser added; or
 - changes to flow regimes, which can change the volumes and flow rates of water, leading to stagnation and subsequent increases in nutrients.

Elevated nutrient concentrations can result in algal blooms that in turn stress the aquatic system via reduced light attenuation and depressed DO concentrations.

Nutrient results of interest were recorded at some sites on one or more occasions, including during both wet and dry sampling events.

Some results of particular interest include:

- Total Phosphorus reading of 0.48 mg/L (P80 = 0.30 mg/L, upstream = 0.39 mg/L) at SW5-03 on 04/05/2022 during dry event monitoring
- Total Nitrogen reading of 1.80 mg/L (P80 = 1.23 mg/L) at SW7-08 on 9/11/2021 during wet event monitoring

- Total Nitrogen reading of 3.54 mg/L (P80 = 1.77 mg/L) at SW7-08 on 9/11/2021 during wet event monitoring

Determination of the route course of these results of particular interest is challenging in hindsight.

Potential management responses to elevated nutrients can include:

- investigating the potential sources of nutrients (e.g., fertiliser);
 - review of erosion and sediment controls where these are still in place; and
 - confirming that the flow regime of the relevant waterway is being maintained appropriately.
- **pH:** The pH of a waterway can be affected by acidification due to exposure of acid sulfate soils, the leaching of tannins and from spills/run-off during concreting and lime stabilisation works.

pH results of interest (both high and low) were recorded at some sites on one or more occasions, including during both wet and dry sampling events. Many of these results fall within the neutral pH range (6.5-8.5). Results of particular interest which fell further from the neutral range than P20/80 and/or upstream values include:

- 8.61 (P80 = 7.33) at SW3-04 on 17/11/2021 during dry event monitoring
- 4.80 (P20 = 5.70) at SW7-02 on 20/05/2022 during dry event monitoring

No clear reason for why these results were recorded was noted during the monitoring or can be accurately inferred at this stage.

Aquatic biota can become stressed when pH levels fall outside optimal ranges. Potential management responses to significant pH results can include:

- for low pH levels, review acid sulfate soil management and cleared vegetation/mulch stockpile management (with respect to tannin leachates) where works/management are still ongoing; and
 - for high pH levels, review management of spills/leaching/runoff associated with concreting and/or lime stabilisation.
- **Metals:** Metals can enter waterways via:
 - soil erosion and off-site movement of eroded soils;
 - stormwater runoff from road surfaces and other pavement areas;
 - exposure and/or oxidation of acid sulfate soils; and
 - chemical spills.

Metals can be toxic to aquatic organisms, with potential harmful effects including death or changes in morphology, physiology, biochemistry, behaviour, and reproduction. Organisms take up metals through food consumption, respiration and through body surfaces. As such, the toxicity of metals is affected by their bioavailability.

Metal results of interest were recorded at most sites however, it is noted that monitoring of metals only commenced at the start of the operational phase (in accordance with the WQMP), so the P80 values are calculated from a very limited set of upstream data. As such, the P80 values are unlikely to reflect the full range of natural variability of each parameter at each site.

Metals results of interests were recorded at most sites, sites on one or more occasions, including during both wet and dry sampling events. Potential management responses to results of interest for metals can include:

- review acid sulfate soil management in areas where there is ongoing management;

- review of erosion and sediment controls where revegetation works are yet to reach targets; and
- review and audit of spill response procedures.

It is noted that monitoring of metals only commenced at the start of the operational phase (in accordance with the WQMP), so the P80 values are calculated from a very limited set of upstream data. As such, the P80 values are unlikely to reflect the full range of natural variability of each parameter at each site.

For some results of interest, consideration was given to providing comparison with default guideline values taken from the Australia and New Zealand Guidelines for Fresh and Marine Water Quality 2018. However as per the instruction from these guidelines the use of default guideline values is generally not appropriate where site specific data exists (ANZG, 2018).

3.4 Groundwater Quality

A spreadsheet containing the groundwater quality monitoring results is progressively updated and provided to TfNSW on a regular basis. Results of interest are highlighted in bold red font in the spreadsheet.

A compilation of the results of interest for the reporting period is provided in **Appendix D** and a snapshot of the groundwater quality monitoring results spreadsheet (as of 14 December 2022) is provided in **Appendix E**.

3.4.1 Discussion

The discussion provided in **Section 3.3.1** regarding potential impacts of project activities on specific surface water quality parameters and potential management responses is also applicable to groundwater quality.

During the reporting period, results of interest were identified at most sites.

- **Electrical Conductivity (EC):** Results of interest were recorded at some sites including:
 - 0.18 mS/cm (P20 = 0.49 mS/cm) at GWB3-33 on 14/12/21
 - 0.49 mS/cm (P80 = 0.29 mS/cm) at GWB3-21 on 14/12/21
 - 0.82 mS/cm (P80 = 0.53 mS/cm) at GWB4-02 on 2/12/21

In some locations and instances, it is considered likely that elevated EC was caused by saltwater intrusion into the groundwater from nearby tidal waterways.

- **pH:** Results of interest were recorded at many sites including:
 - 6.05 (P80 = 4.07) at GWB3-32 on 14/12/21
 - 5.82 (P80 = 5.22) at GWB3-47 on 02/12/21
 - 6.28 (P80 = 5.68) at GWB8-16 on 29/11/21

It is noted that the baseline pH range for some bores is quite narrow; for example, GWB8-16 has a P20 of 5.28 and a P80 of 5.68. It is considered that pH levels slightly outside such a narrow range are not a cause for concern. The pH of groundwater can be affected by the disturbance of acid sulfate soils or as a result of the infiltration of chemicals or contaminants to groundwater.

Uncontained runoff from concreting works or lime stabilisation may also impact pH levels.

Potential responses to results of interest can include:

- for low pH levels, review acid sulfate soil management where this is still being undertaken; and
 - for high pH levels, review management relating to the storage of chemicals and of leaching associated with concreting and/or lime stabilisation where these works may still be ongoing.
- **Nutrients (Total N and Total P):** Results of interest were recorded at some sites including:
 - TP of 0.14 mg/L (P80 = 0.05 mg/L) at GWB3-38 on 07/12/21
 - TN of 42.30 mg/L (P80 = 25.84 mg/L) at GWB5-01 on 02/12/21
 - TN of 2.55 mg/L (P80 = 0.40 mg/L) at GWB8-16 on 29/11/21

Elevated nutrient levels can occur because of the infiltration of surface water runoff to groundwater. Management responses to elevated nutrients can include comparisons of the nutrient levels at nearby surface water monitoring sites and inspections to determine if there may be a relatively direct hydraulic pathway between surface water and groundwater, for example, in areas of relatively shallow groundwater or near cuttings or constructed rock platforms. Additionally, a review of revegetation activities coinciding with elevated results may indicate nutrient infiltration from fertiliser application.

- **Salts:** Results of interest were recorded at some sites. Results of particular interest include:
 - Bicarbonate at 192 mg/L (P80 = 109 mg/L) at GWB3-07 on 02/12/21
 - Chloride at 103 mg/L (P80 = 87 mg/L) at GWB3-14 on 29/11/21
 - Bicarbonate at 248 mg/L (P80 = 115 mg/L) at GWB4-02 on 02/12/21
 - Calcium at 405 mg/L (P80 = 204.7 mg/L) at GWB5-01 on 02/12/21
 - Chloride at 134 mg/L (P80 = 87 mg/L) at GWB8-16 on 29/11/21
 - Sulfate at 54 mg/L (P80 = 10 mg/L) at GWB8-22 on 29/11/21

Salts are soluble and have the potential to infiltrate groundwater via the soil. Management responses to elevated salt levels can include the inspection of controls designed to avoid the seepage of water from pollution control basins and a review of revegetation activities. In some locations and instances, it is considered likely that elevated salt levels were caused by saltwater intrusion into the groundwater from nearby tidal waterways.

- **Metals:** Results of interest were recorded at some sites including:
 - Copper at 0.950 mg/L (P80 = 0.360 mg/L) at GWB3-32 on 29/11/21
 - Zinc at 0.037 mg/L (P80 = 0.019 mg/L) at GWB4-02 on 02/12/21
 - Lead at 0.026 mg/L (P80 = 0.001 mg/L) at GWB5-01 on 02/12/21
 - Zinc at 0.083 mg/L (P80 = 0.013 mg/L) at GWB8-16 on 29/11/21

Metals can become mobilised in the environment via the exposure of acid sulfate soils and subsequent acidification of groundwater sources. This is not likely during the operational phase as all acid sulfate soil areas have been suitably managed. Potential responses to results of interest for metals can include a review of acid sulfate soil management (where still undertaken) and spill containment infrastructure.

- **Hydrocarbons:** No hydrocarbon results of interest were detected during this reporting period.

3.5 Groundwater Levels

A compilation of the results of interest for the reporting period is provided in **Appendix F** and charts of the groundwater levels are presented in **Appendix G**.

3.5.1 Discussion

Results of interest were recorded at some sites. Investigations to determine the likelihood of project activities being a contributing factor to these results consider site observations that indicate interception of groundwater levels.

Potential management responses can include measures to collect and transfer groundwater seepage from the up-gradient side of the cut to the down gradient side of the cut.

4. Project Response to Results

As discussed in **Section 3**, the updated monitoring data is provided to TfNSW on a regular basis. The project responds to the water monitoring results as follows:

1. The water monitoring data is reviewed, with particular focus on the results of interest that have been identified.
2. The results assist with setting the focus for the project's periodic environmental management inspections, noting it is in the operational phase.
3. During these inspections, any potential environmental actions are identified (e.g., maintenance, replacement, or upgrade).
4. The aforementioned actions are tracked and implemented.

When reviewing a result of interest, the first step is to determine whether project activities with the potential to influence the result were underway at the time of (or prior to) the monitoring event. Where project activities are considered a potential contributor to the result of interest, existing management measures are reviewed and, where appropriate, additional management measures are considered. If it is determined that additional management measures are warranted, they are implemented and monitored for efficacy. It is noted that this review of project activities is particularly focussed on the construction phase of the project. During the operational phase there has been no major construction activities associated with the project. The project is now a full operational highway that forms part of the wider NSW road network. The areas adjacent to the project however are still subject to different land use practices as is relevant to their location e.g., rural, agricultural, forestry etc.

With regard to surface water monitoring, sometimes the downstream monitoring site is not connected by continuous water to the upstream monitoring site. In such instances, the waterway may be a series of isolated pools. The review of a result of interest and consideration of the adequacy of the management measures takes into account the lack of connectivity at the time of the monitoring event.

A significant feature of the reporting period was heavy rain and flooding. The project area was subjected to a number of significant regional flooding events during the reporting period, which resulted in significant inundation to the project and surrounding areas, as well as substantial periods of inundation after the peak flood events due to the location on existing floodplains. These events impacted water quality at the catchment and floodplain level both immediately after the events and for a significant portion of time following the events due to the protracted floodwater recession process across the floodplains adjacent to and surrounding the project area.

It is noted that monitoring of metals only commenced at the start of the operational phase (in accordance with the WQMP), so the P80 values are calculated from a very limited set of pre-construction and upstream data. As such, the P80 values are unlikely to reflect the full range of natural variability of each parameter at each site.

During the management review of potential results of interest, the project incident register is reviewed to determine whether there has been a spill reported in the area that may have adversely impacted the water quality within the project area. During the reporting period there were no environmental incidents recorded and all construction activities have been completed. There were however a number of natural events such as multiple catchment wide flooding events and heavy periods of rainfall that occurred during the reporting period that may have impacted on the water quality of the project area.

5. Recommendations

5.1 Monitoring Program

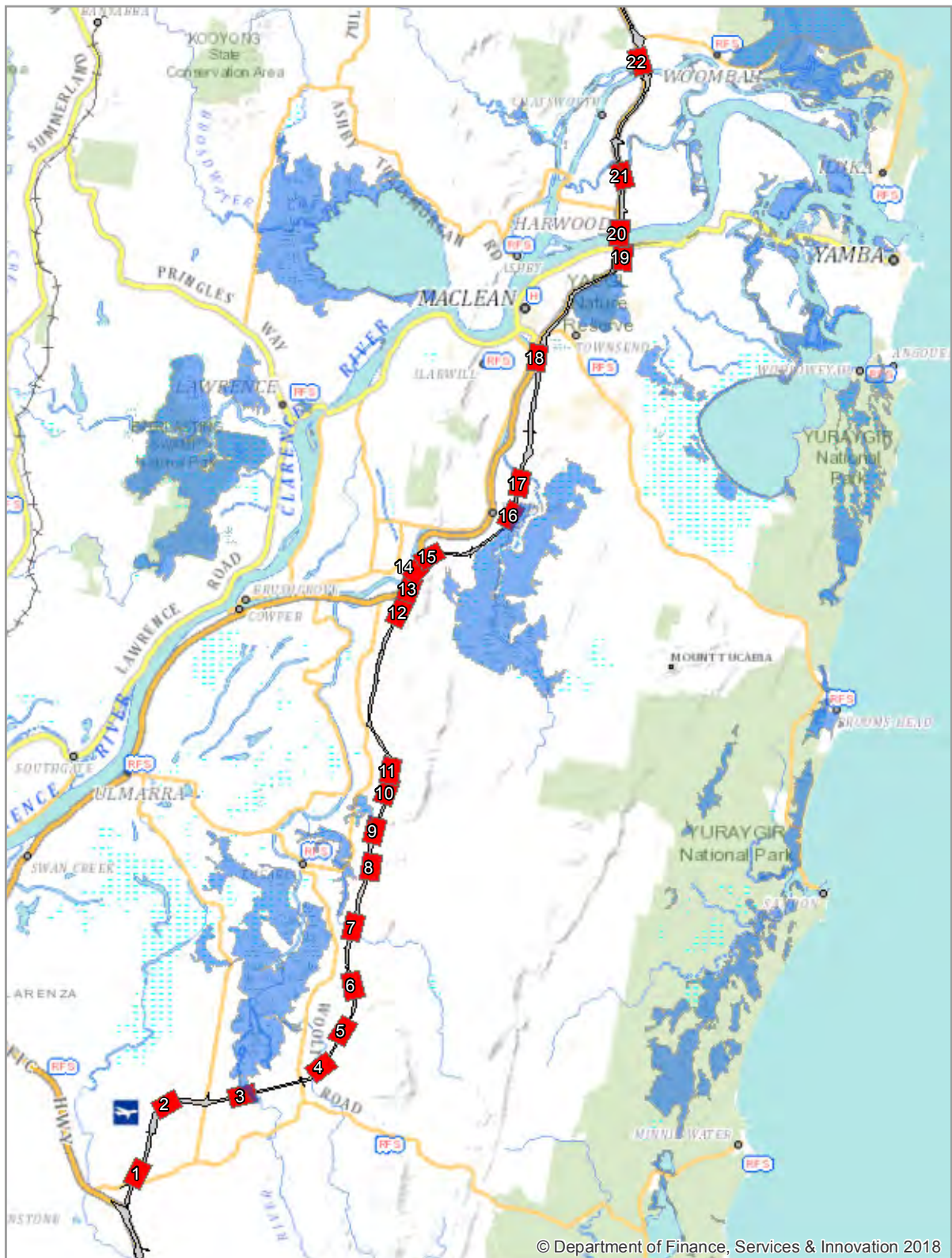
It is recommended that the monitoring program continue in accordance with Sections 4.2.2.2, 4.3.1.3 and 4.3.2.3 of the WQMP for the operational phase of the project. The next reporting period, between July 2022 and June 2023, will be the third and final year of operational water quality monitoring for the W2B project in accordance with the approved Water Quality Monitoring Program.

References

- ANZECC ARMCANZ (1995). *Guidelines for groundwater protection in Australia*. Australian and New Zealand Environment and Conservation Council (ANZECC), Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ).
- ANZECC ARMCANZ (2000a). *Australian and New Zealand guidelines for fresh and marine water quality. Volume 1, The Guidelines*. Australian and New Zealand Environment and Conservation Council (ANZECC), Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ).
- ANZECC ARMCANZ (2000b). *Australian guidelines for water quality monitoring and reporting*. Australian and New Zealand Environment and Conservation Council (ANZECC), Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ).
- ANZG (2018). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia. Available at www.waterquality.gov.au/anz-guidelines
- GeoLINK, (2019). *Pacific Highway Upgrade – Woolgoolga to Ballina Sections 3 to 11 – Water Quality Monitoring Program*. 26/06/2019 for NSW Road and Maritime Service.
- RMS, Aurecon, SKM, (2012a). *Upgrading the Pacific Highway. Woolgoolga to Ballina. Working Paper – Water Quality*. November 2012.
- RMS, Aurecon, SKM, (2012b). *Upgrading the Pacific Highway. Woolgoolga to Ballina. Working Paper – Groundwater*. November 2012.

Appendix A

Monitoring Locations Maps



LEGEND

- Approved Project Boundary
- Map sheet
- Coastal wetland

0 5 Km

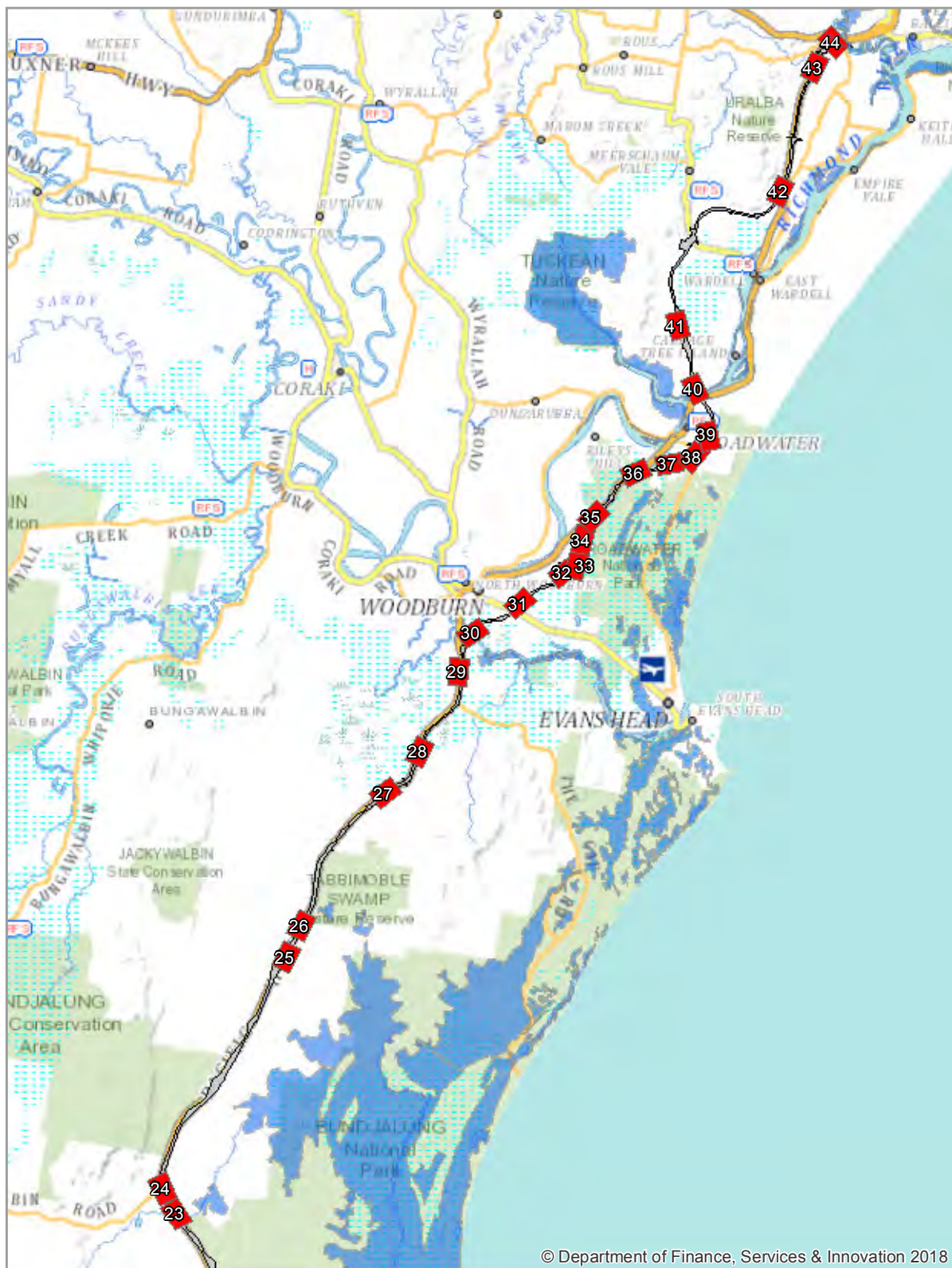


GeoLINK
environmental management and design

W2B – Sections 3 to 11 - Water Quality Monitoring Program
2476-1028 - Rev A

Map Key Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations

Sheet 1 of 2



© Department of Finance, Services & Innovation 2018

LEGEND

- Approved Project Boundary
- Map sheet
- Coastal wetland

0 5 Km

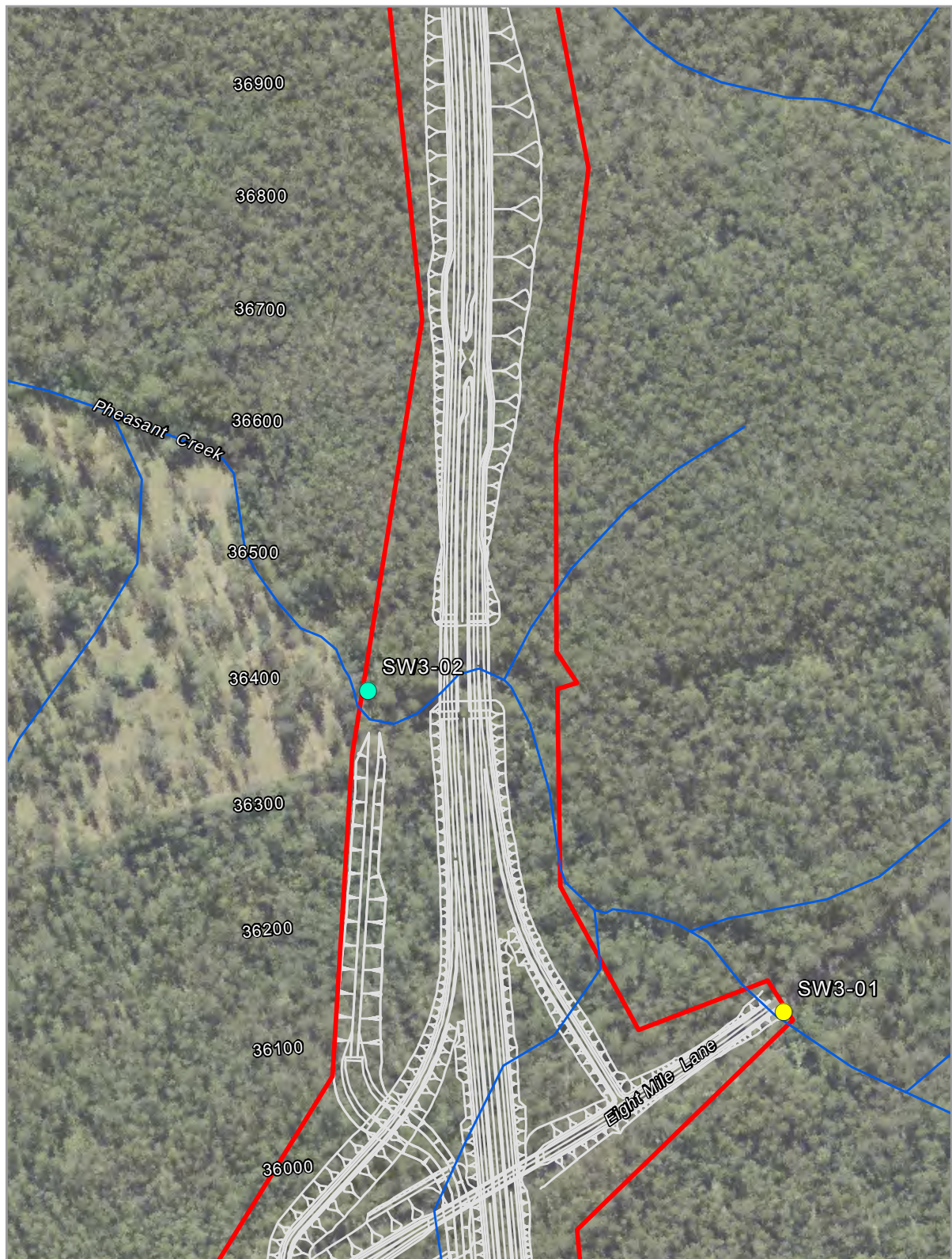


GeoLINK
environmental management and design

W2B – Sections 3 to 11 - Water Quality Monitoring Program
2476-1028 - Rev A

Sheet 2 of 2

Map Key Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations



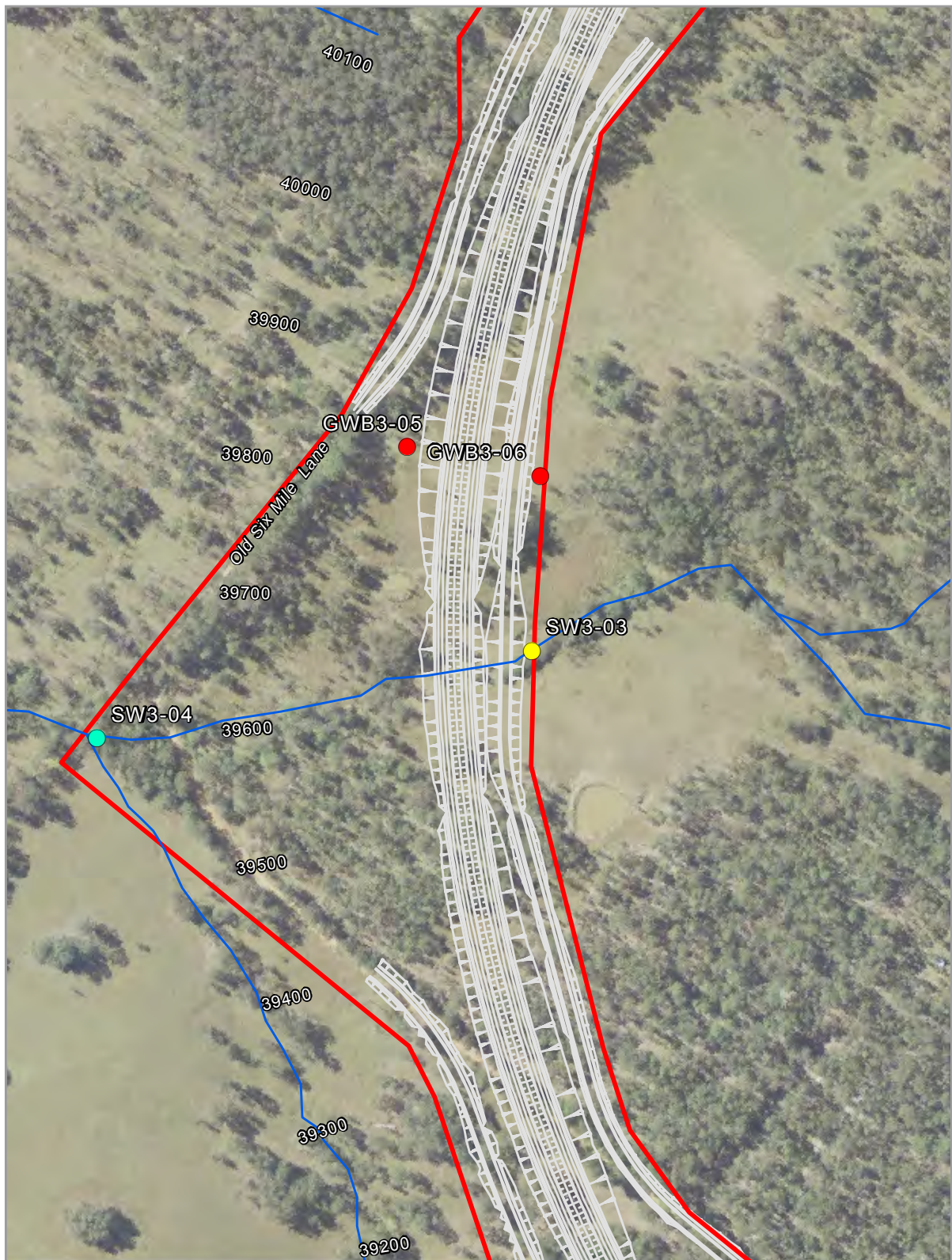
LEGEND

- Approved Project Boundary
- Watercourse

- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations



LEGEND

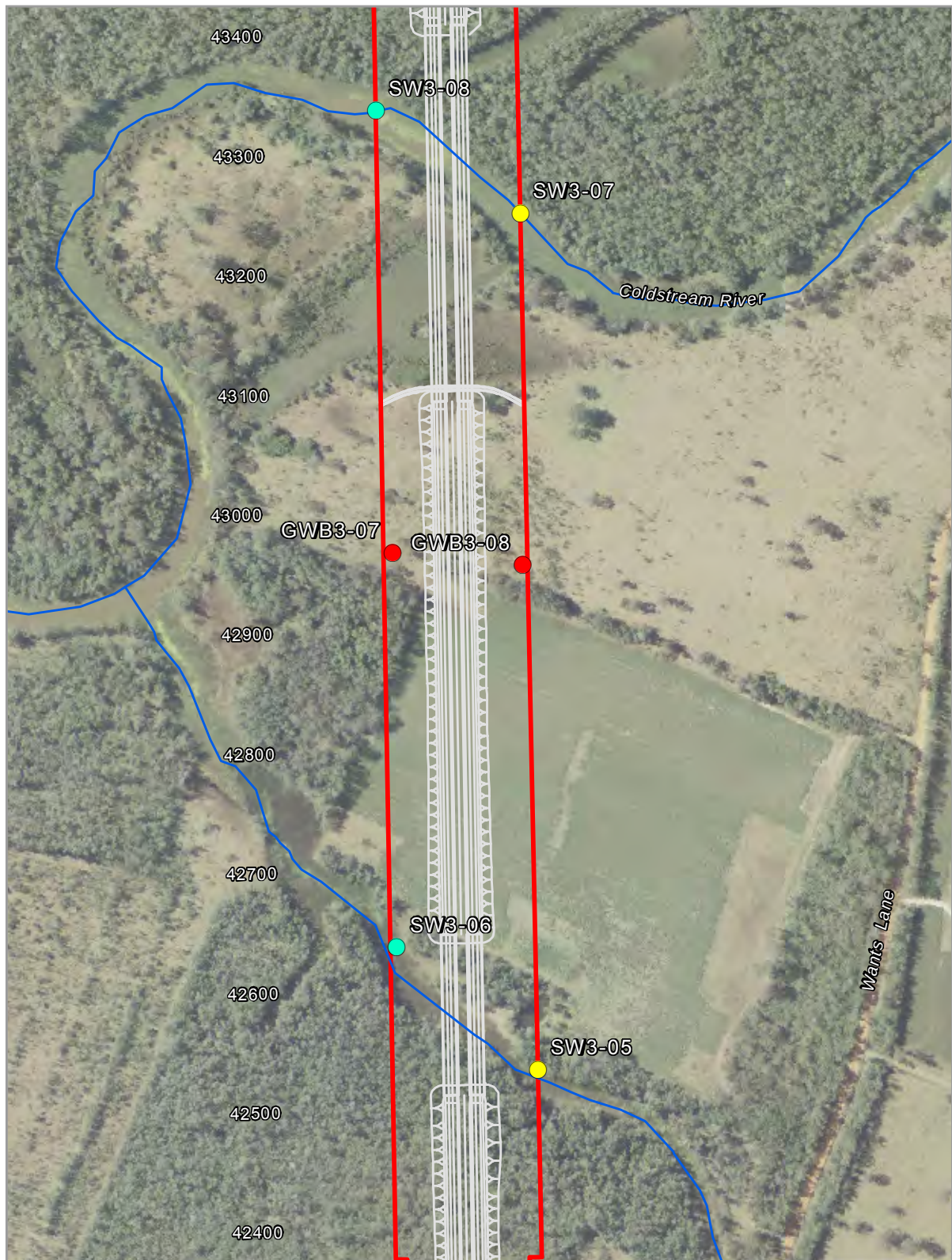
Approved Project Boundary
— Watercourse

● Groundwater monitoring - levels and quality
● Downstream surface water monitoring point
● Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

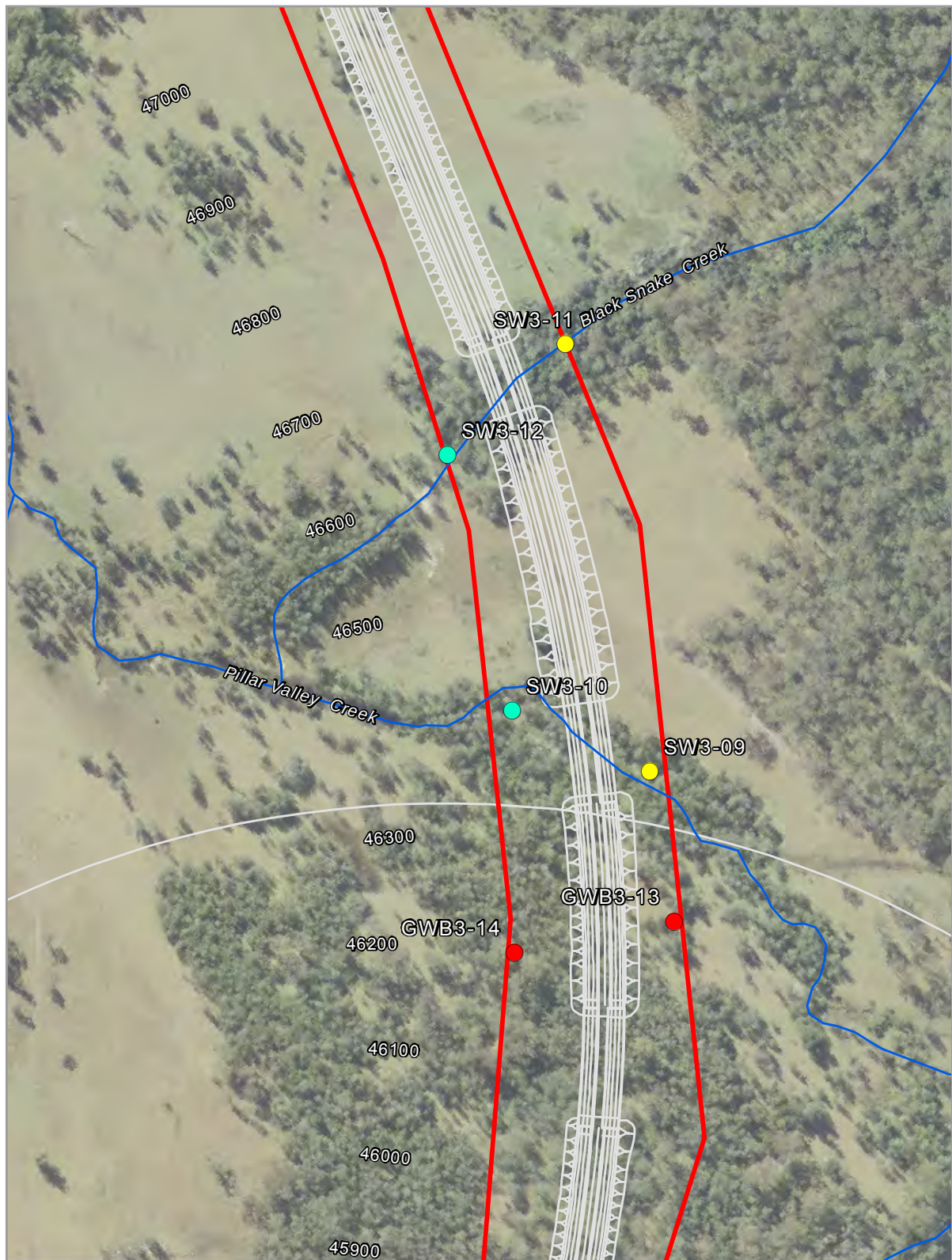
- Approved Project Boundary
- Watercourse

- Groundwater monitoring - levels and quality
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

- Approved Project Boundary
- Watercourse

- Groundwater monitoring - levels and quality
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

- Approved Project Boundary
- Groundwater monitoring - levels and quality
- Watercourse

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

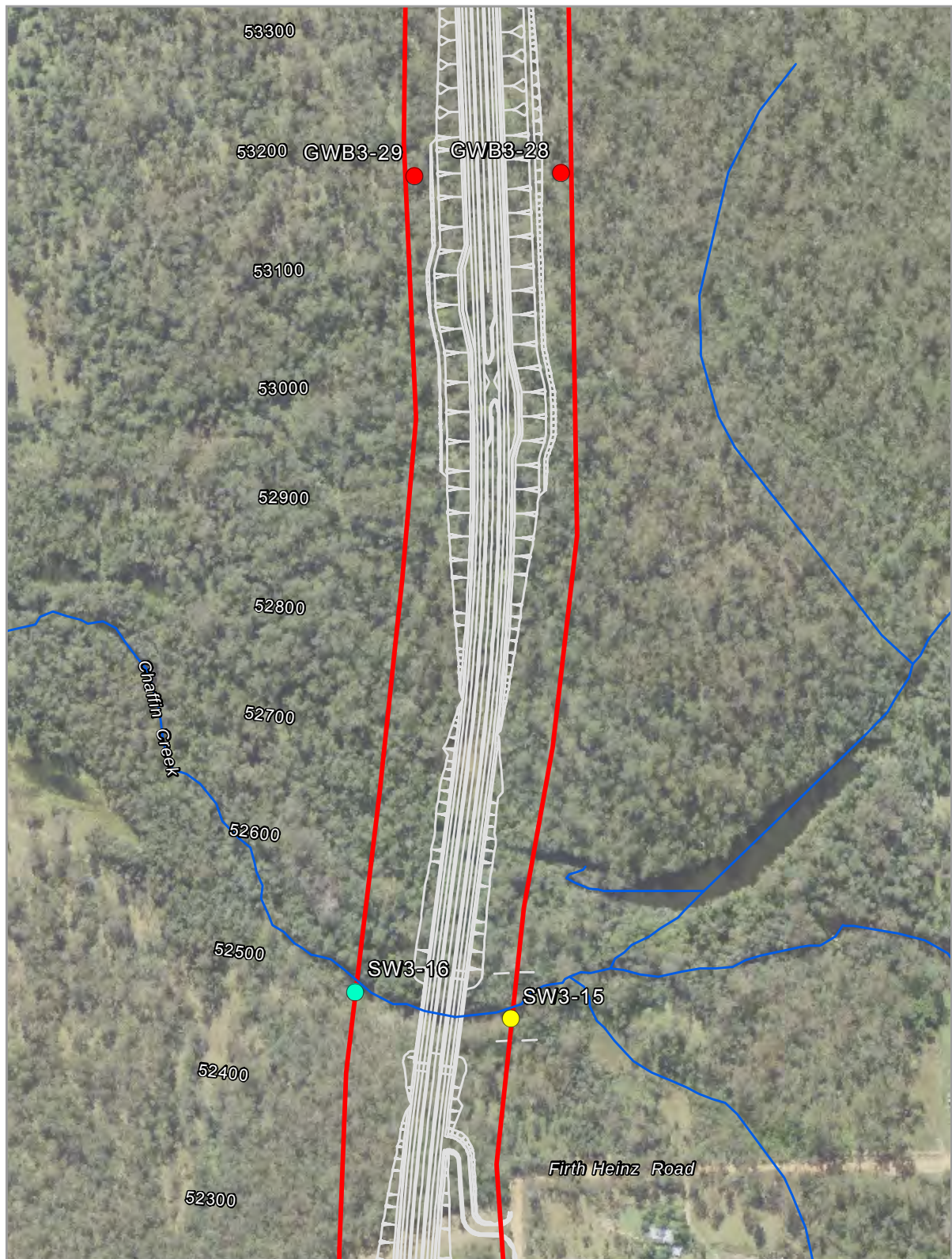
Approved Project Boundary
 Watercourse

● Downstream surface water monitoring point
● Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

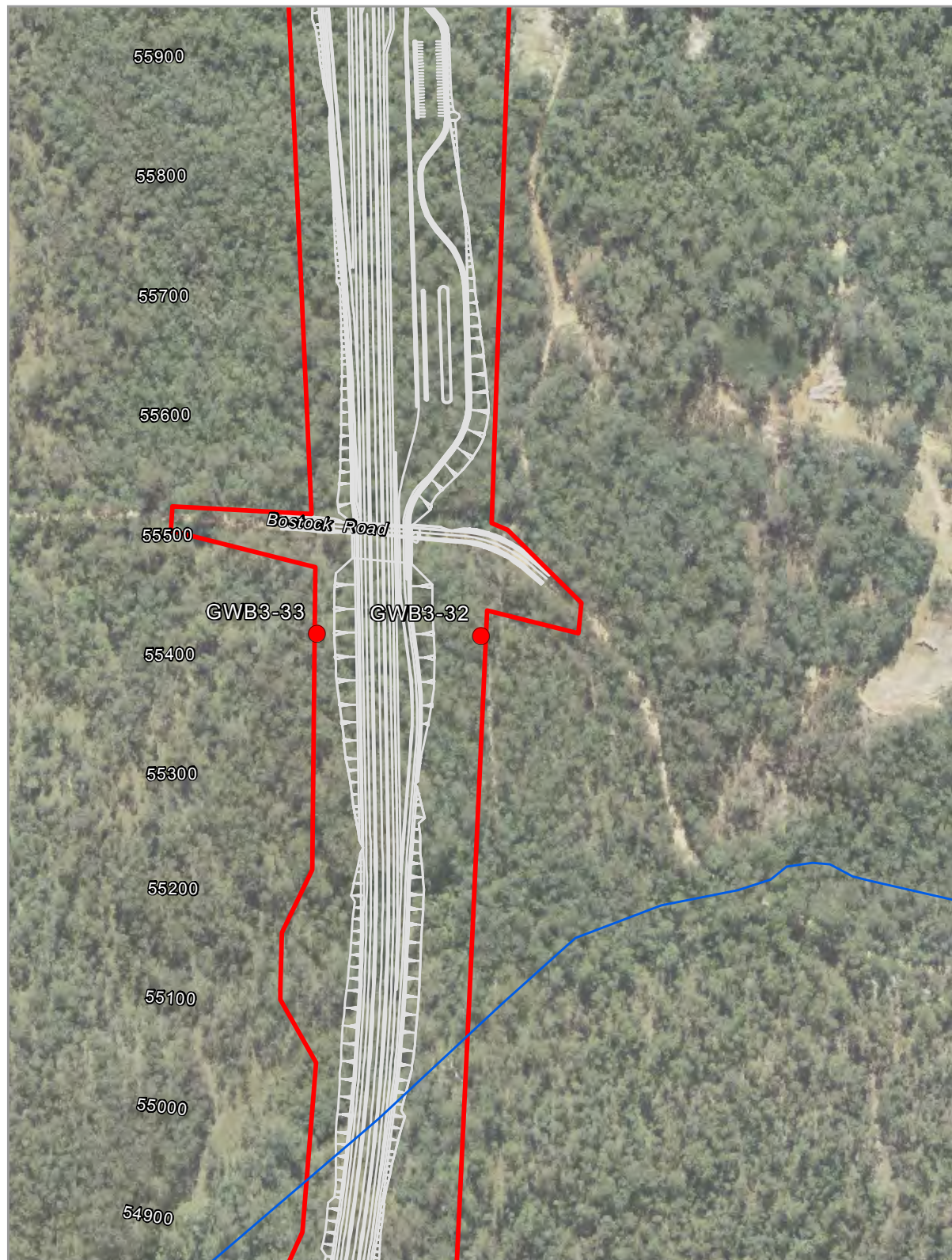
- Approved Project Boundary
- Watercourse

- Groundwater monitoring - levels and quality
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





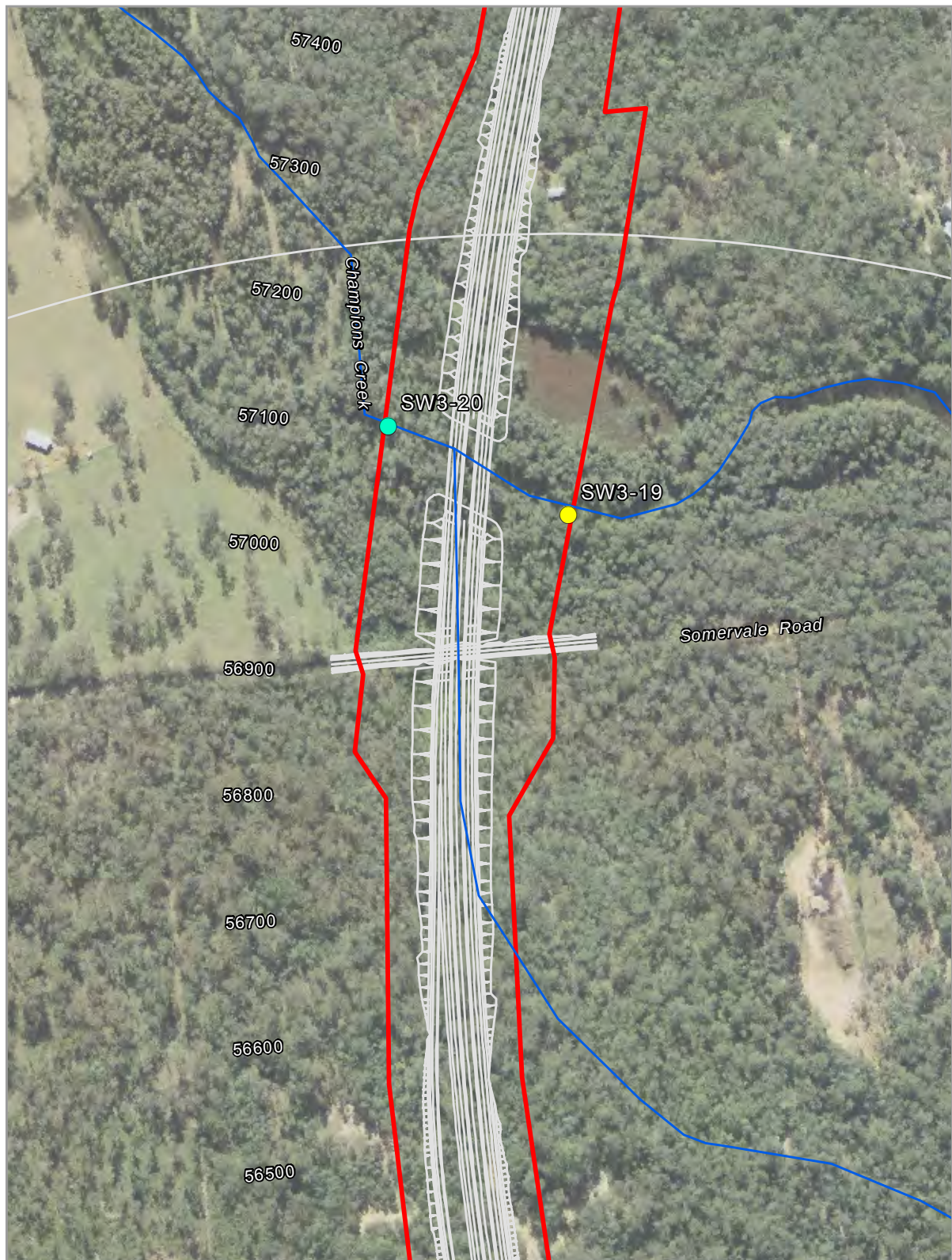
LEGEND

- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels and quality

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

- Approved Project Boundary
- Watercourse

- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations



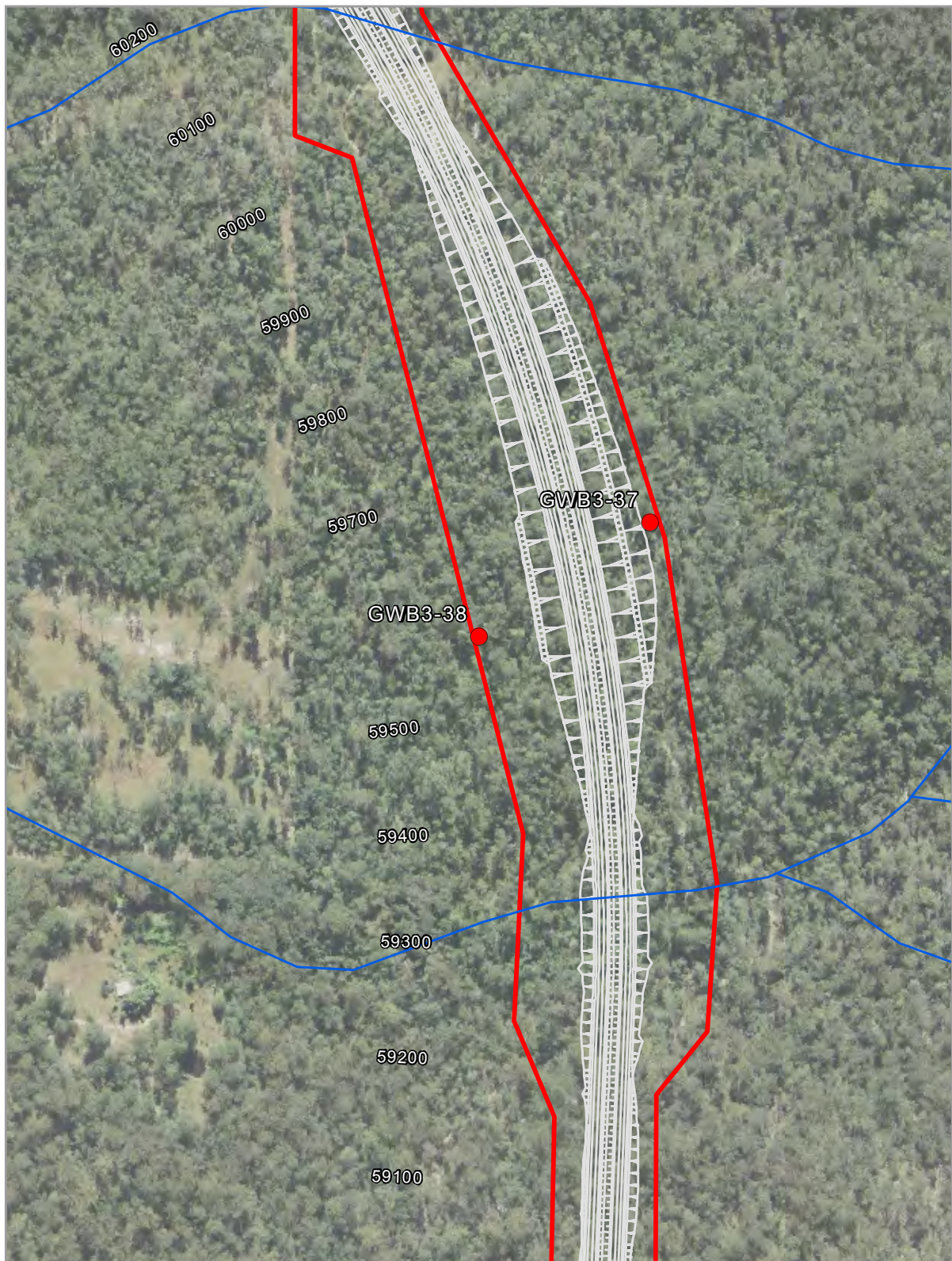


LEGEND

 Approved Project Boundary	● Downstream surface water monitoring point
— Watercourse	● Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations



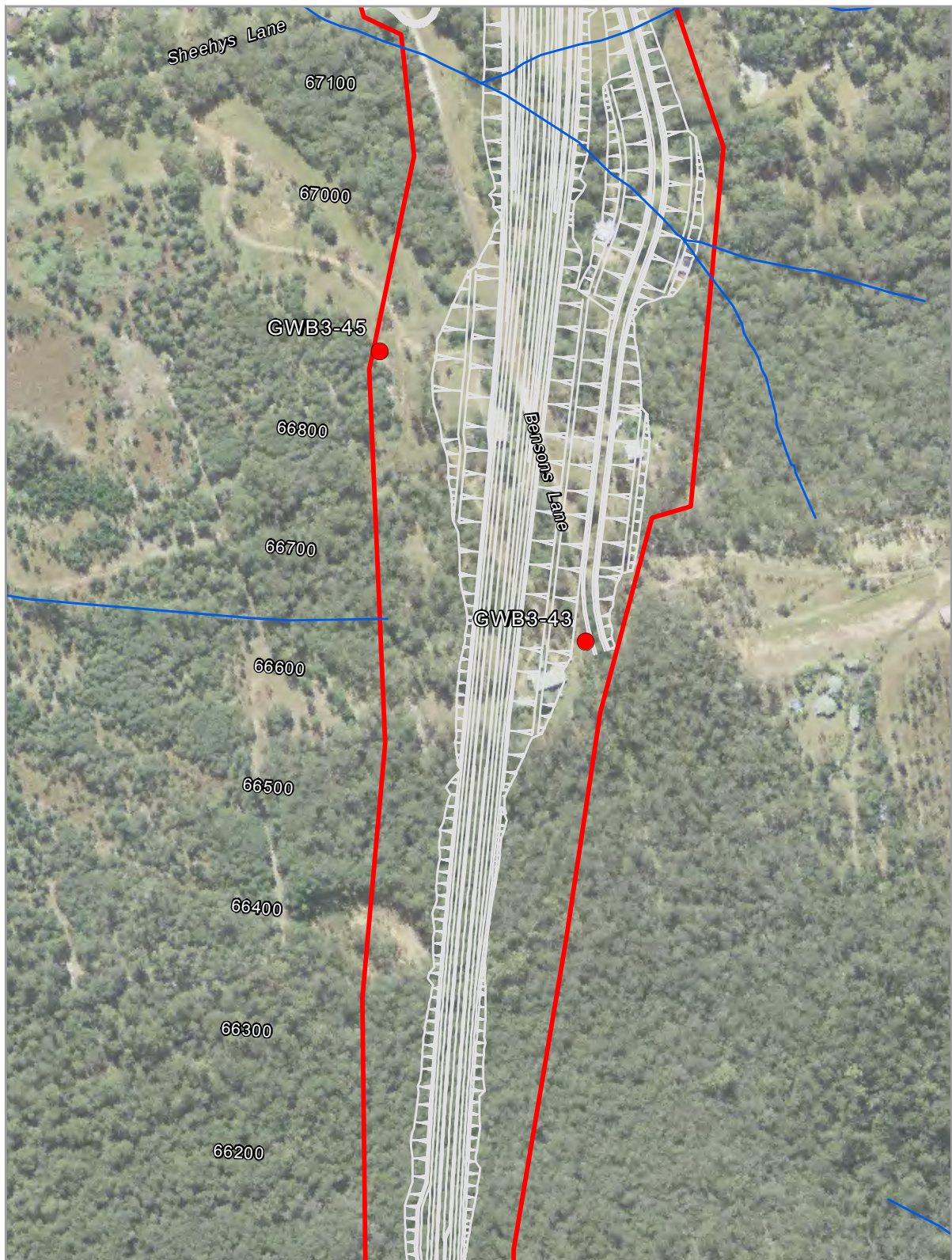
LEGEND

- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels and quality

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





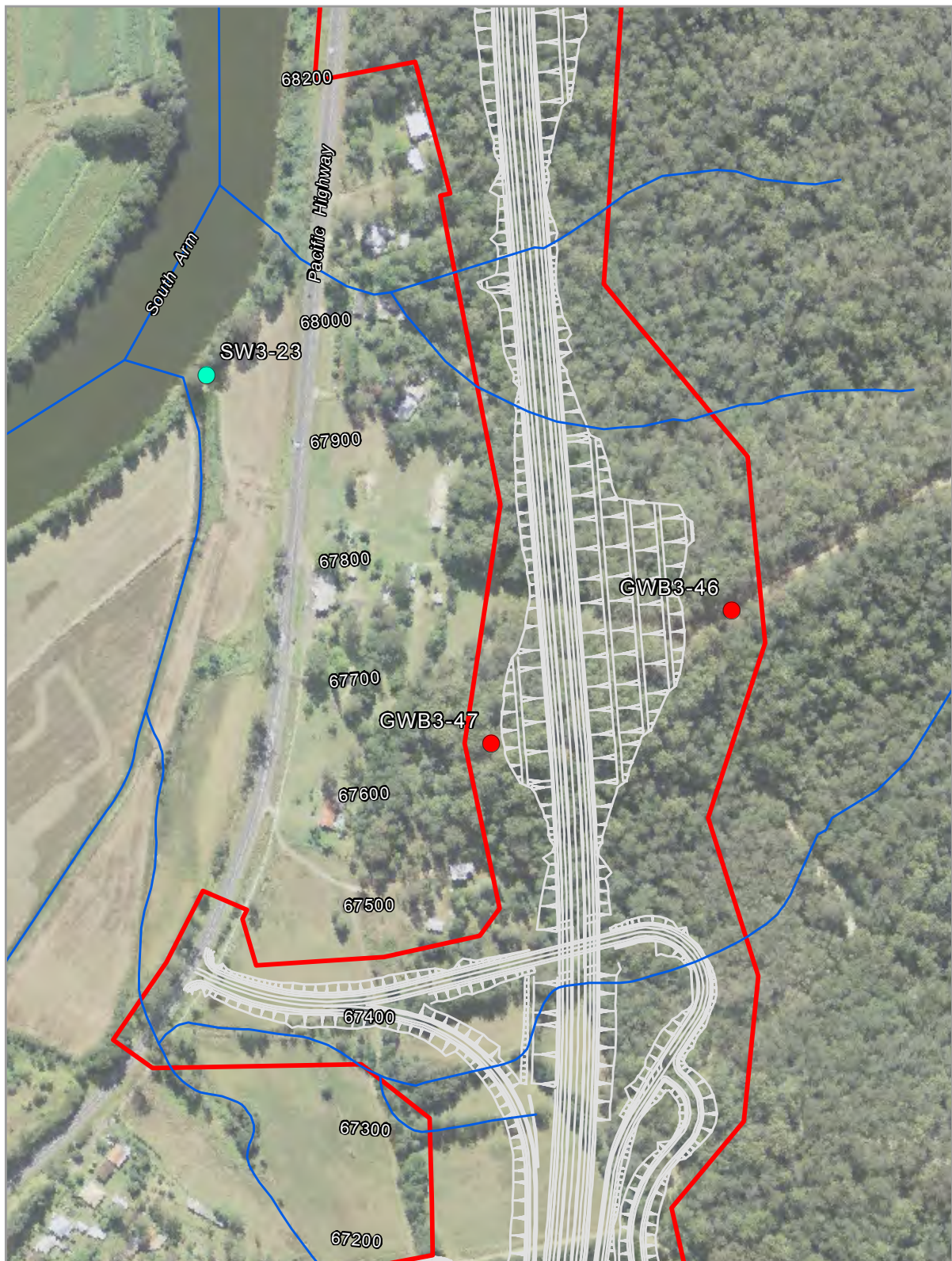
LEGEND

- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels and quality

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





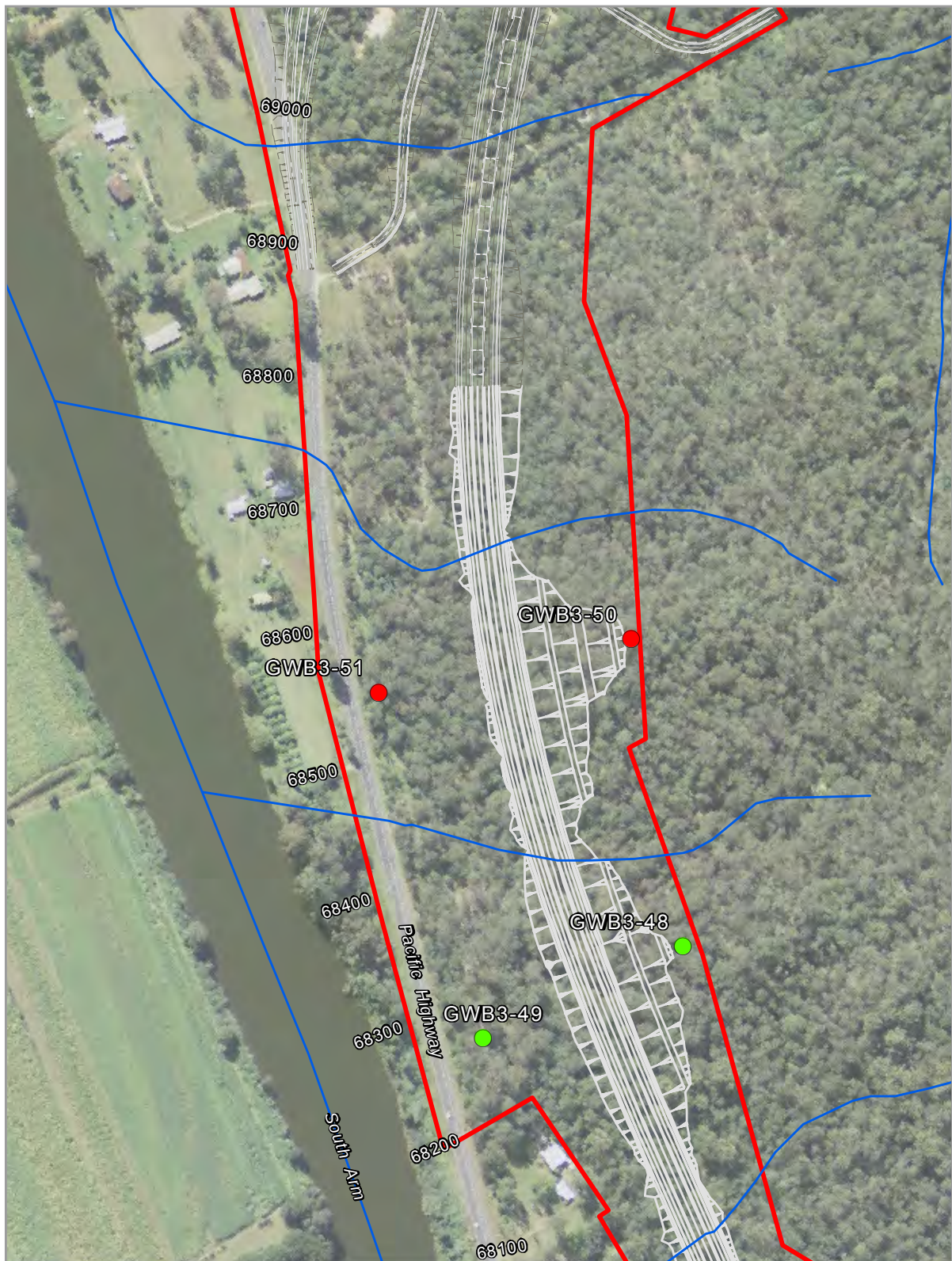
LEGEND

- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels and quality
- Downstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

- Approved Project Boundary
- Watercourse

- Groundwater monitoring - levels only
- Groundwater monitoring - levels and quality

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





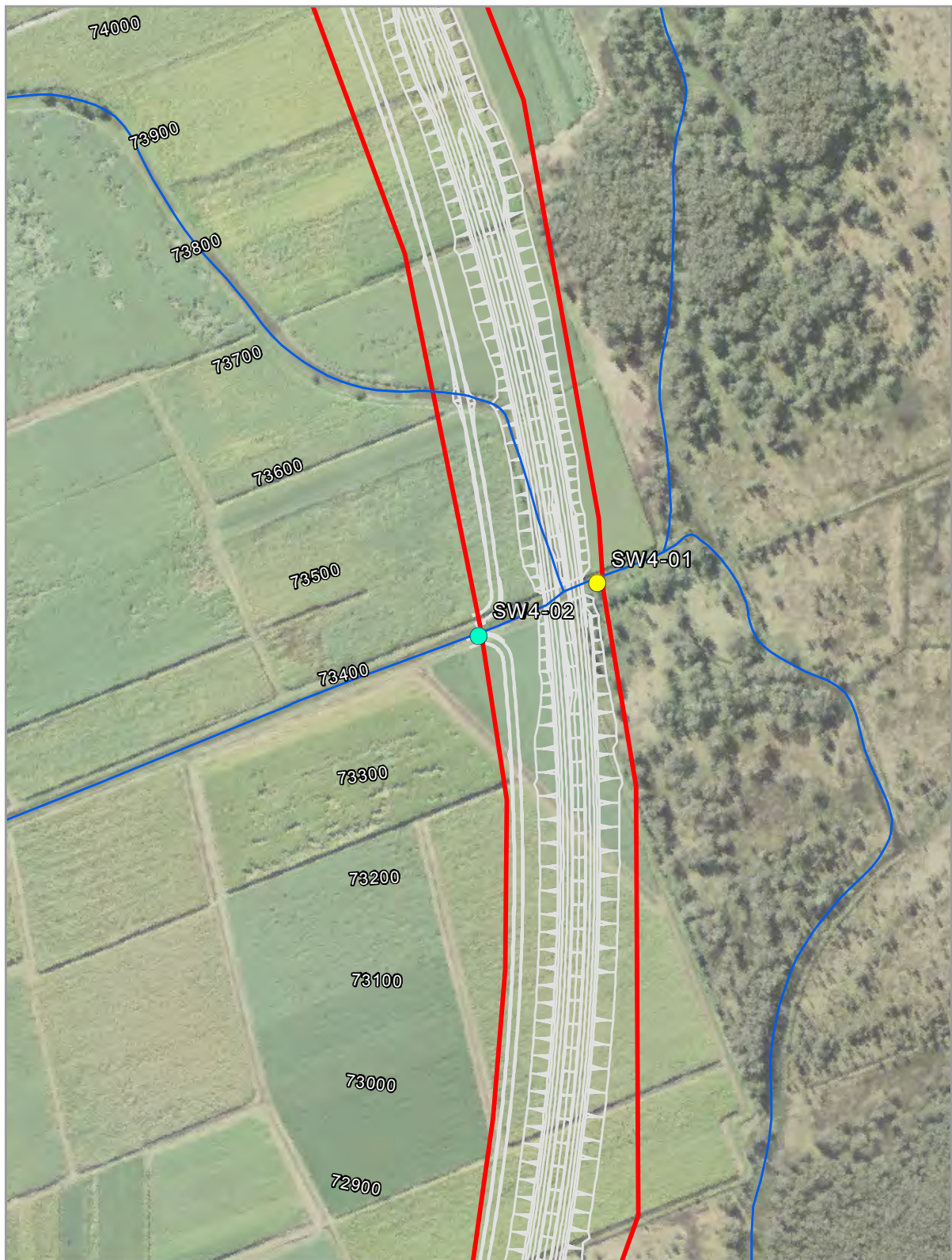
LEGEND

- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels and quality

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





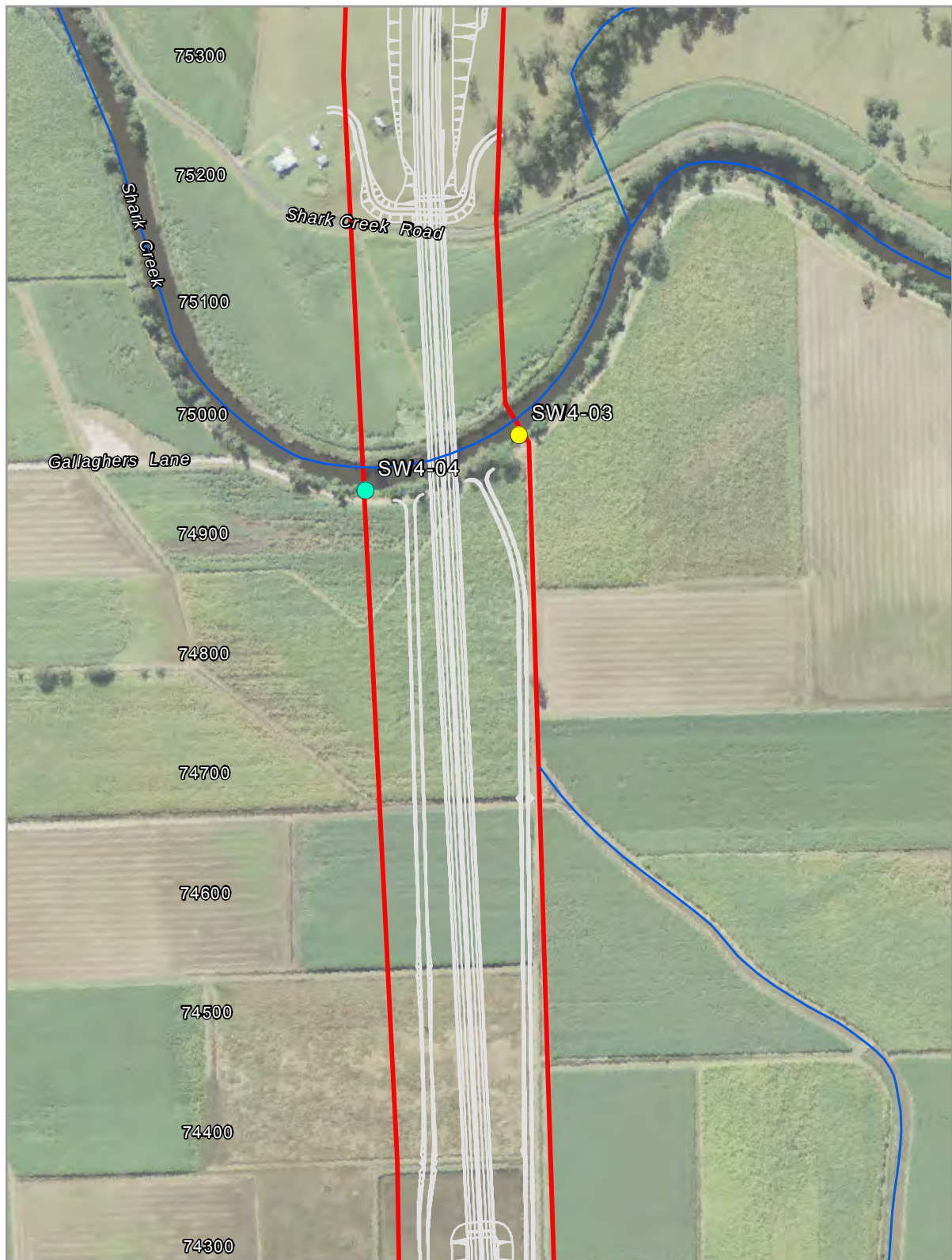
LEGEND

 Approved Project Boundary	● Downstream surface water monitoring point
— Watercourse	● Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

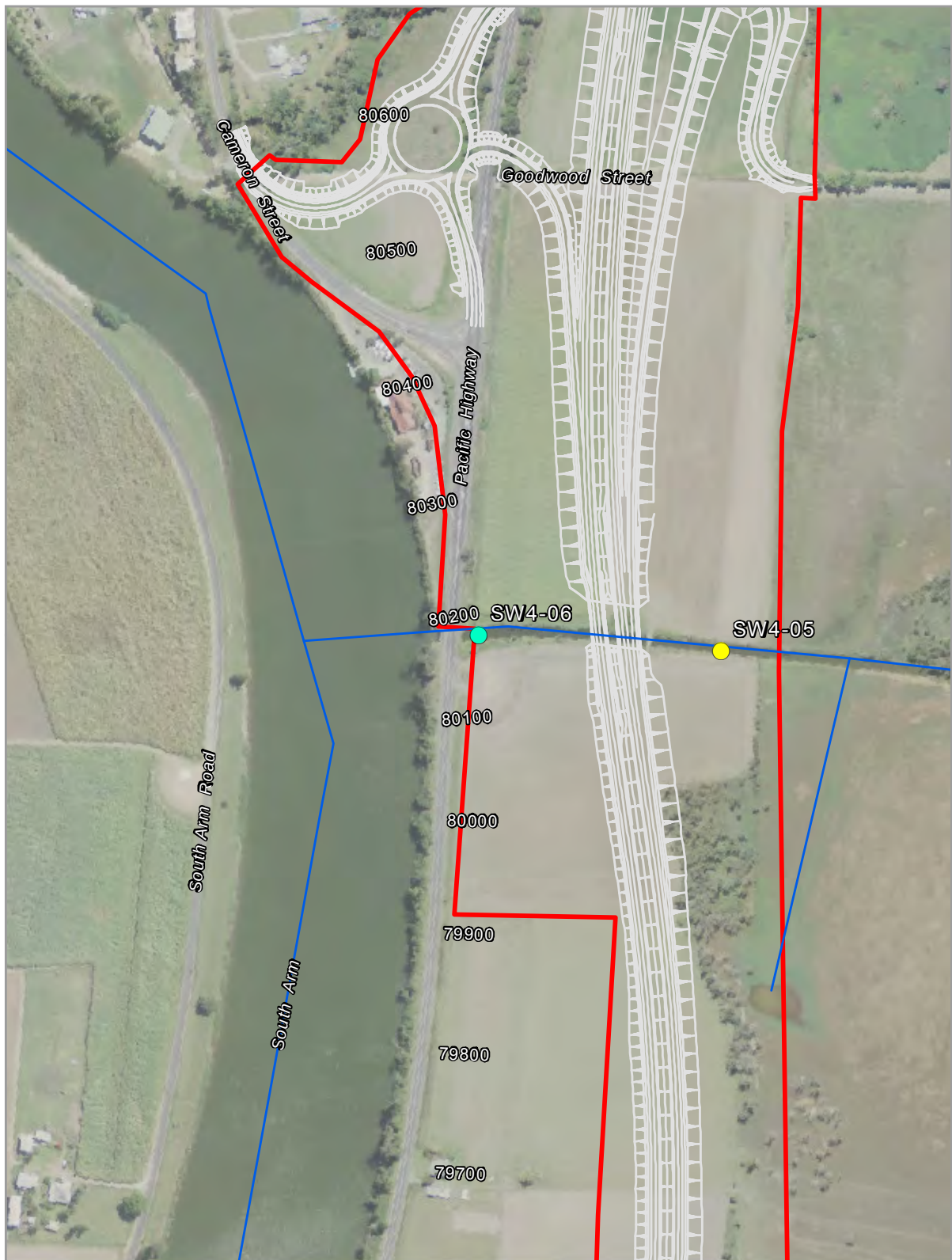
- Approved Project Boundary
- Watercourse

- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

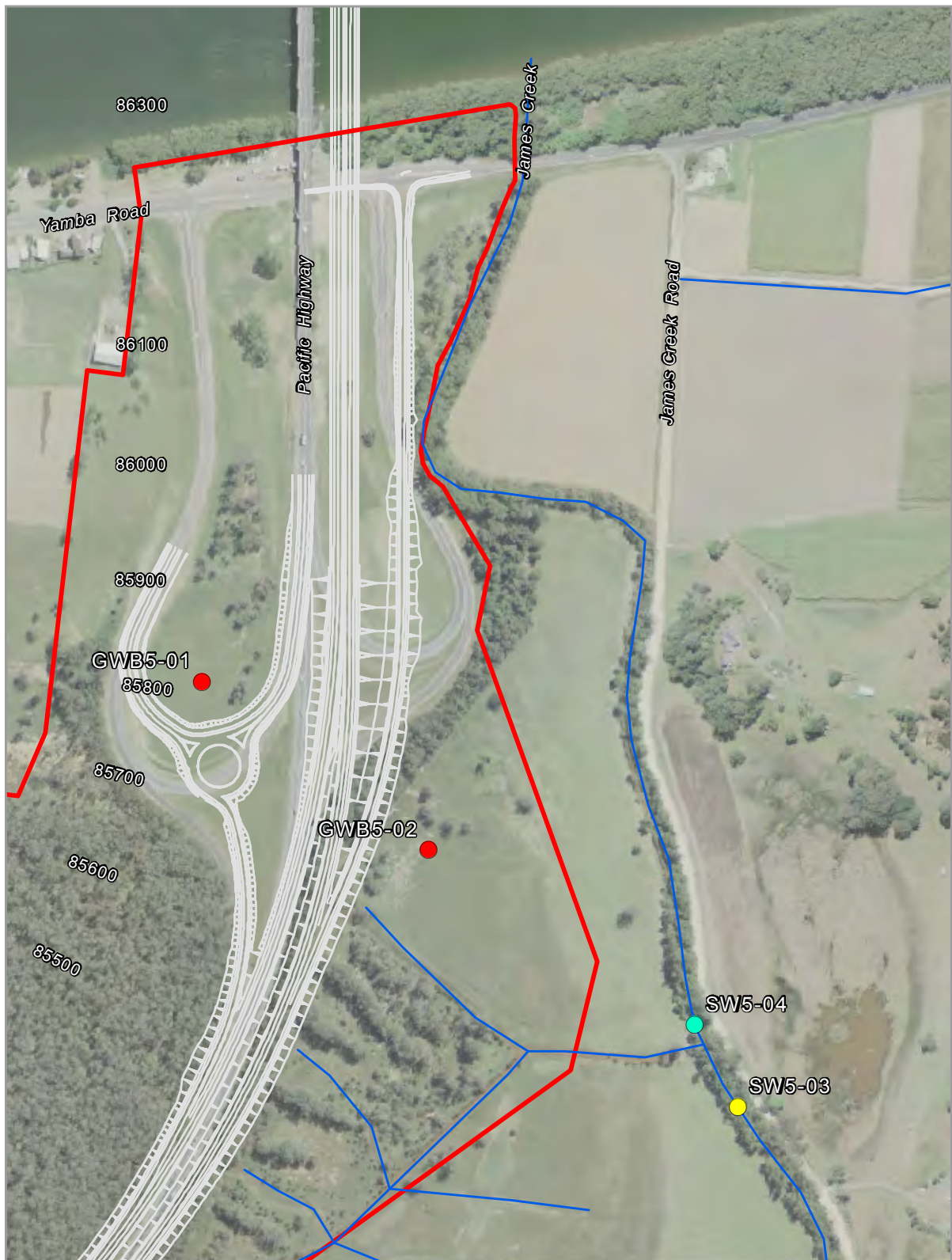
- Approved Project Boundary
- Watercourse

- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





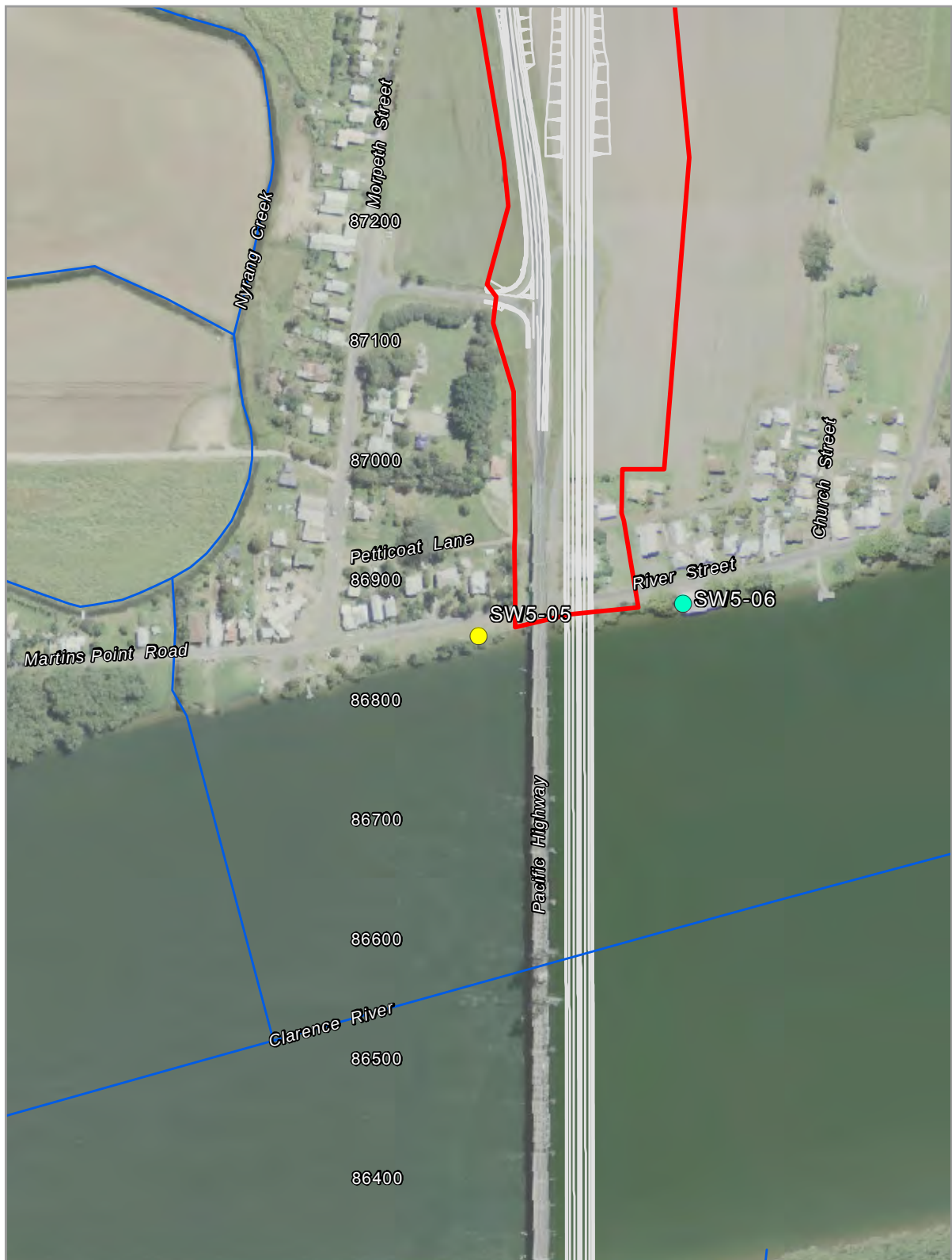
LEGEND

 Approved Project Boundary	● Groundwater monitoring - levels and quality
— Watercourse	● Downstream surface water monitoring point
	● Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

- Approved Project Boundary
- Watercourse
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





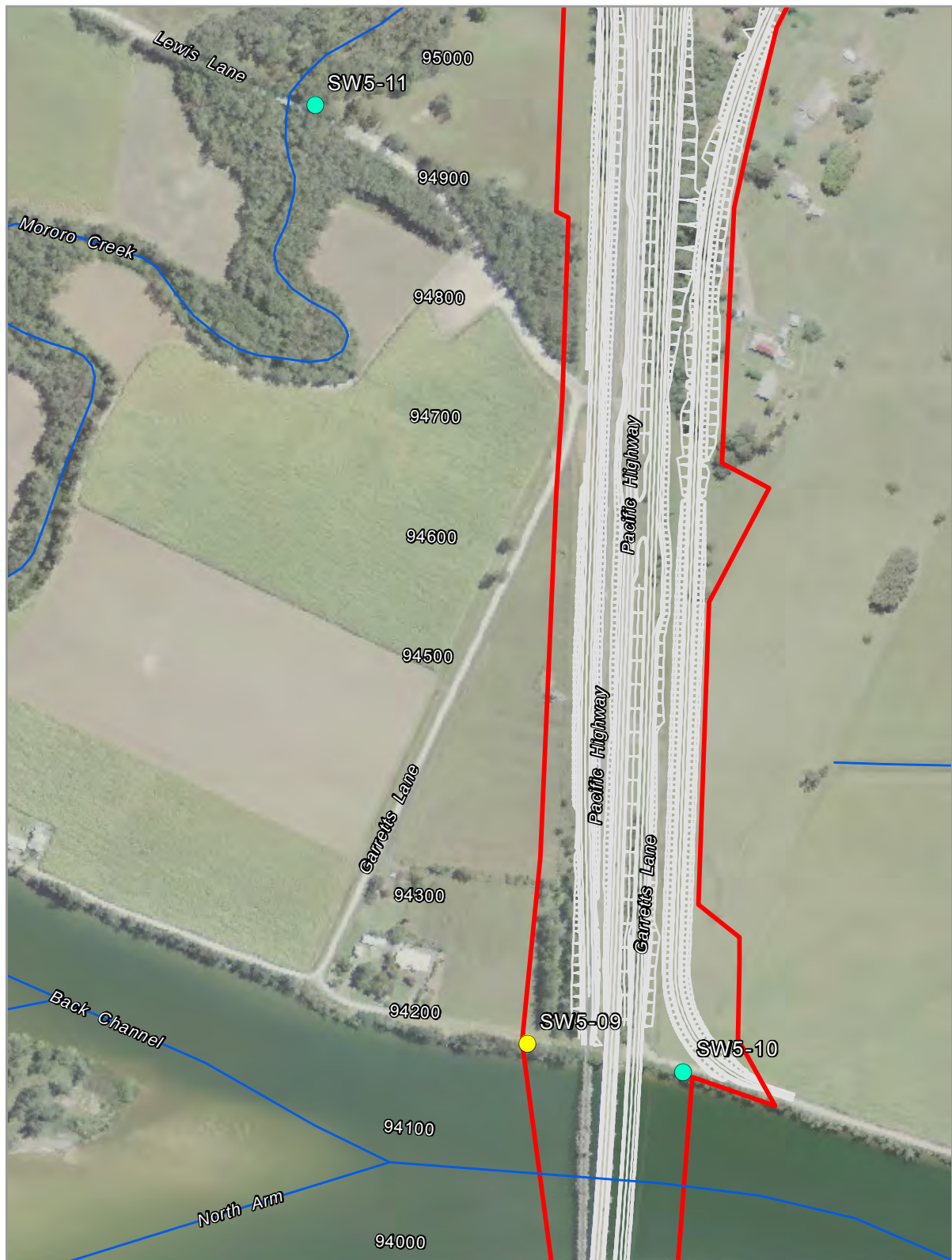
LEGEND

 Approved Project Boundary	● Downstream surface water monitoring point
— Watercourse	● Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





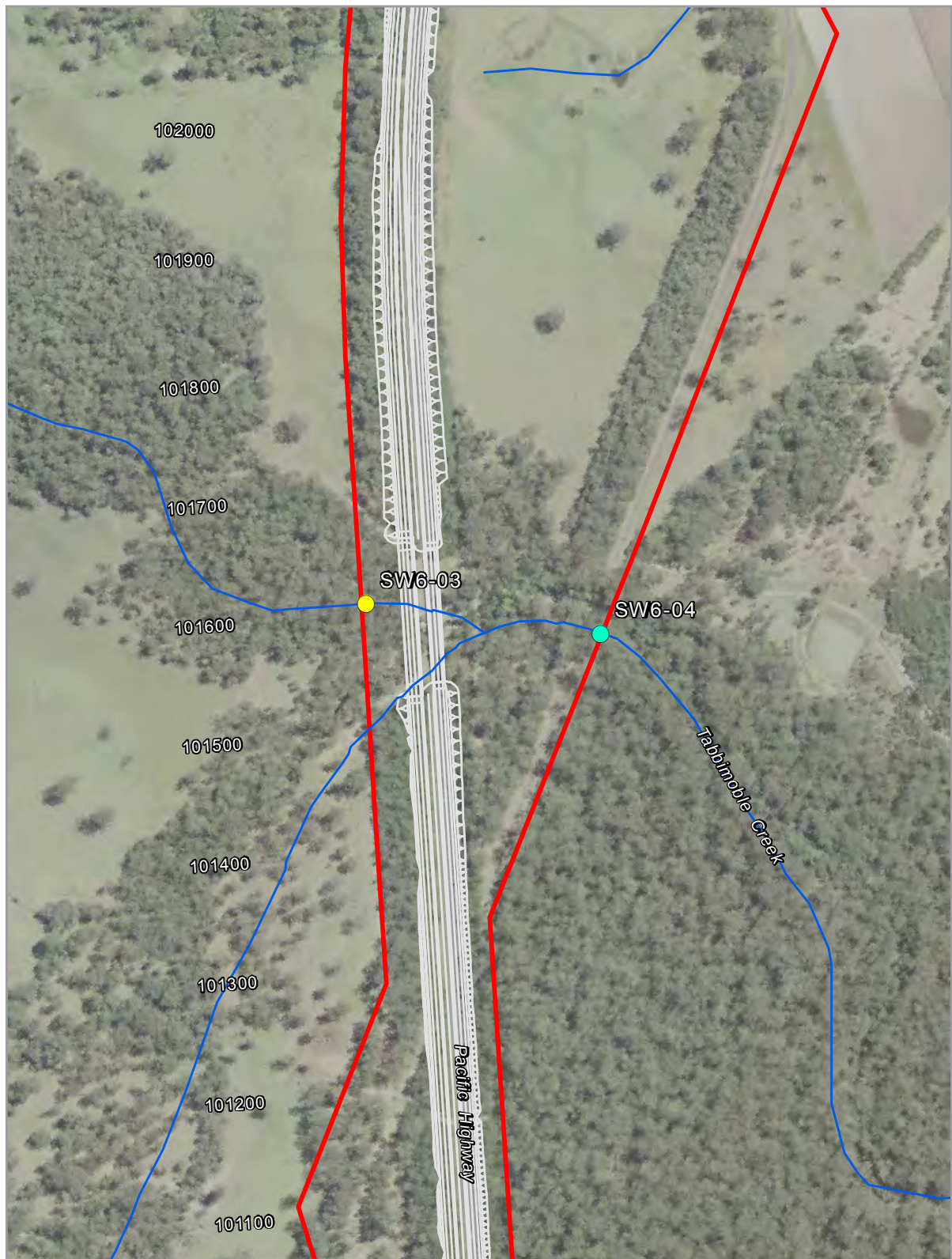
LEGEND

 Approved Project Boundary	● Downstream surface water monitoring point
— Watercourse	● Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

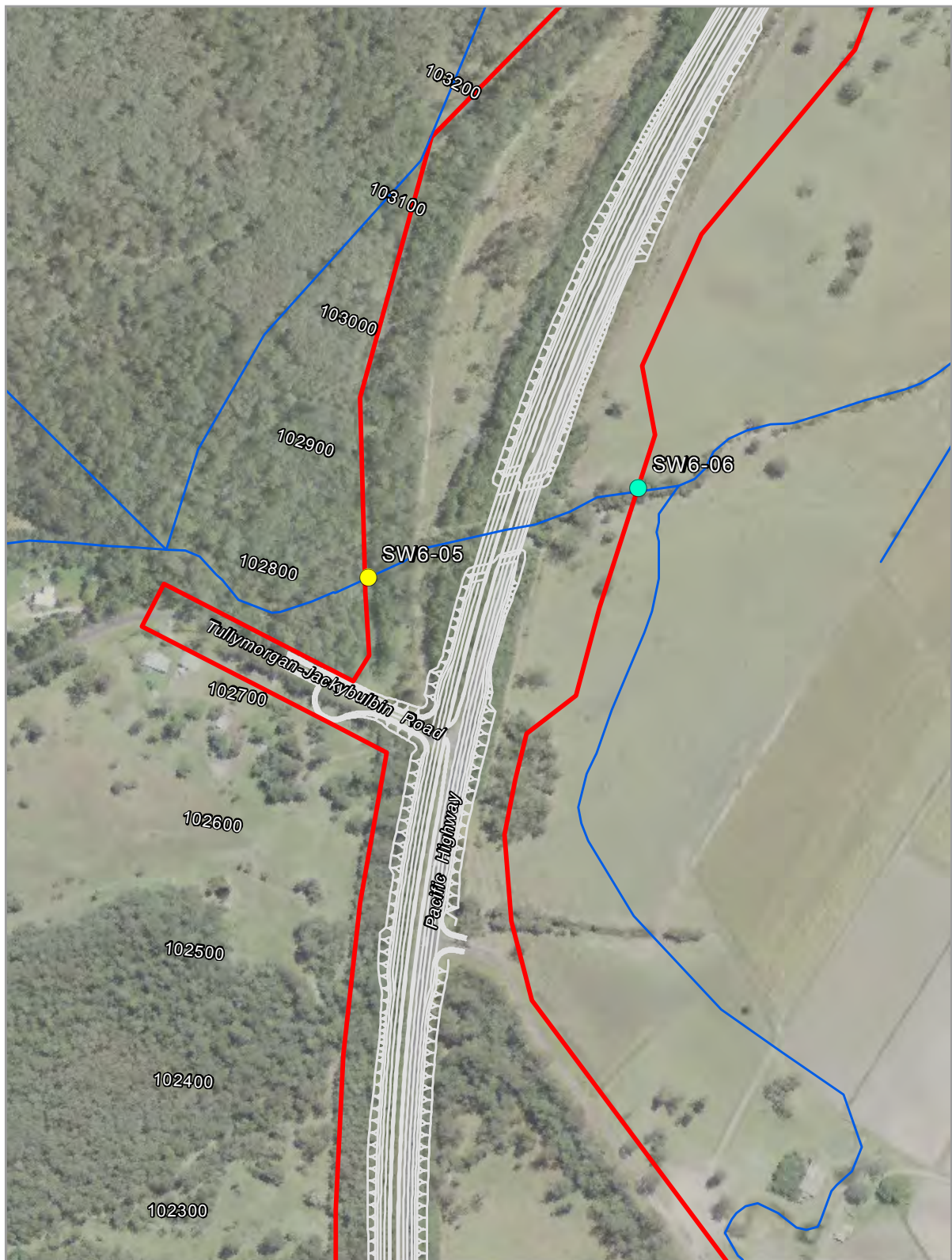
Approved Project Boundary
— Watercourse

● Downstream surface water monitoring point
● Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





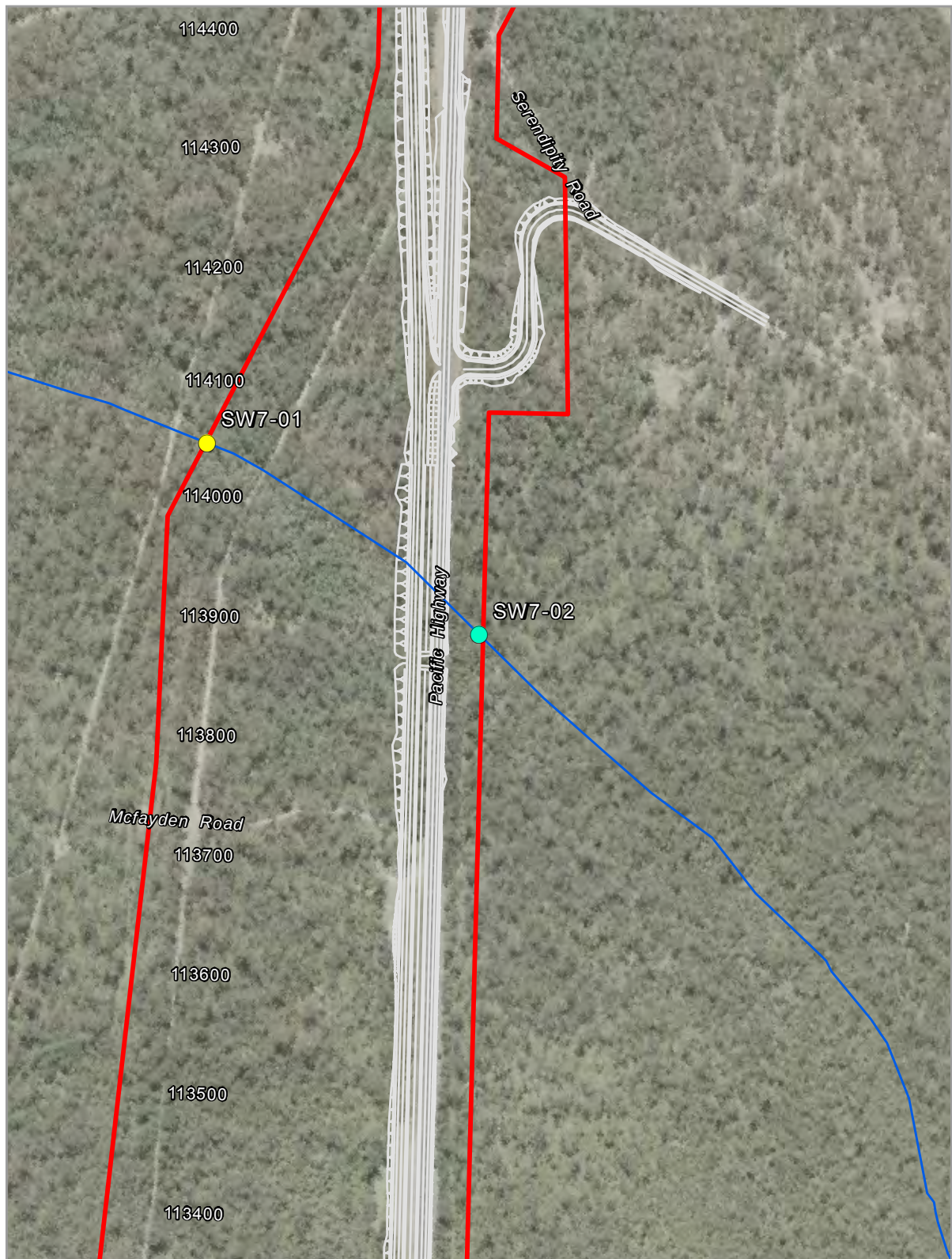
LEGEND

- Approved Project Boundary
- Watercourse
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

- Approved Project Boundary
- Watercourse

- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations



LEGEND

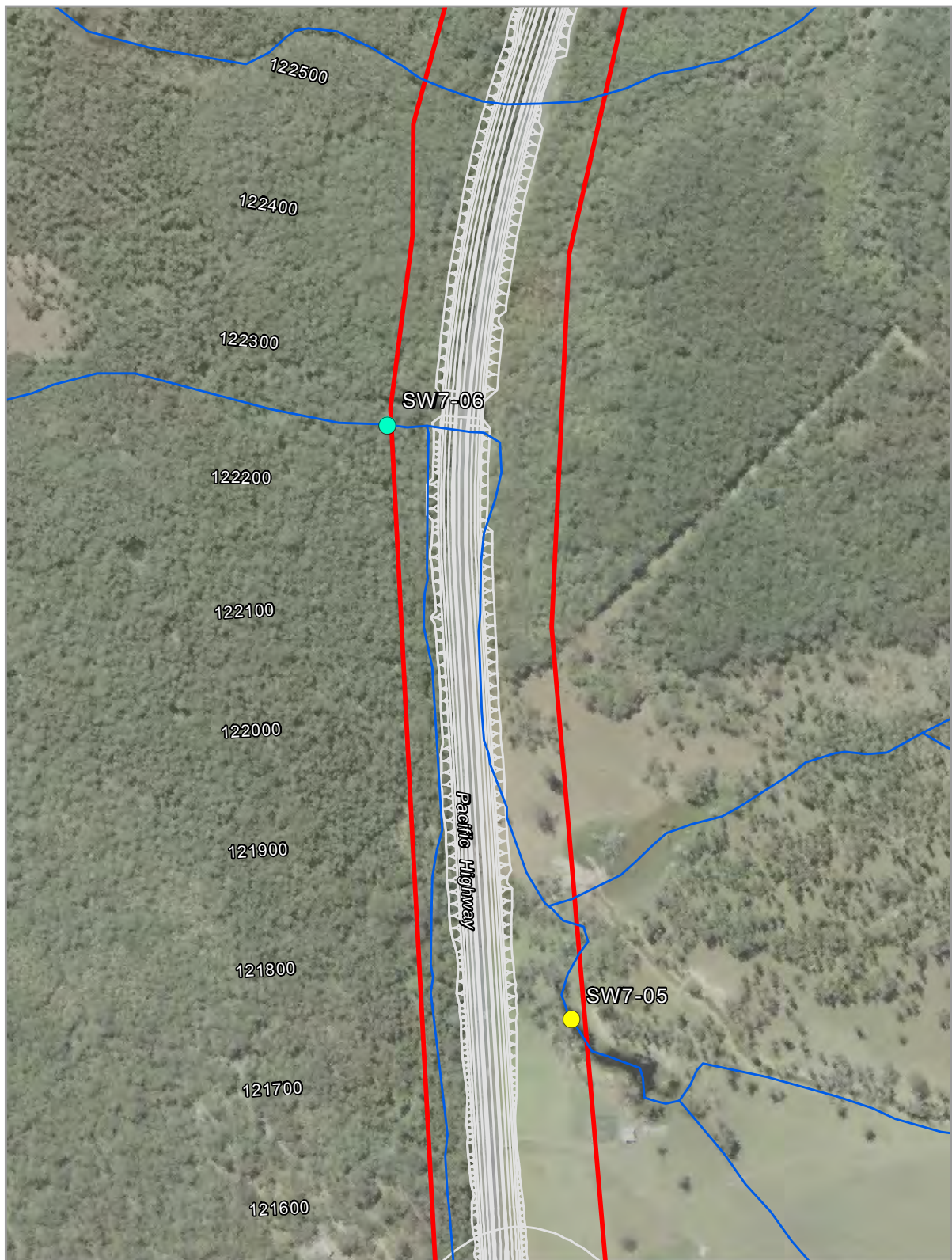
- Approved Project Boundary
- Watercourse

- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

 Approved Project Boundary	● Downstream surface water monitoring point
— Watercourse	● Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





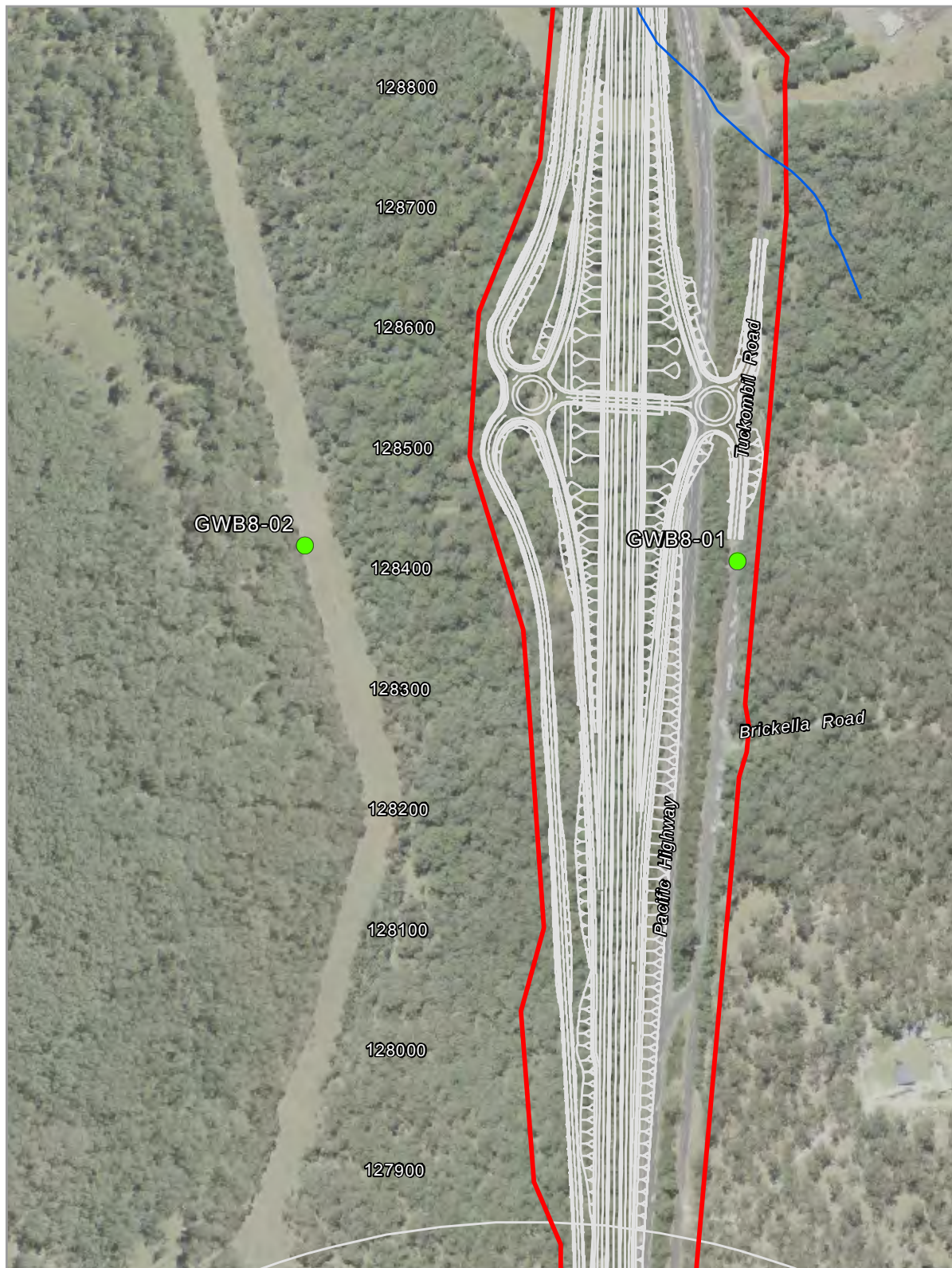
LEGEND

- Approved Project Boundary
- Watercourse

- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations



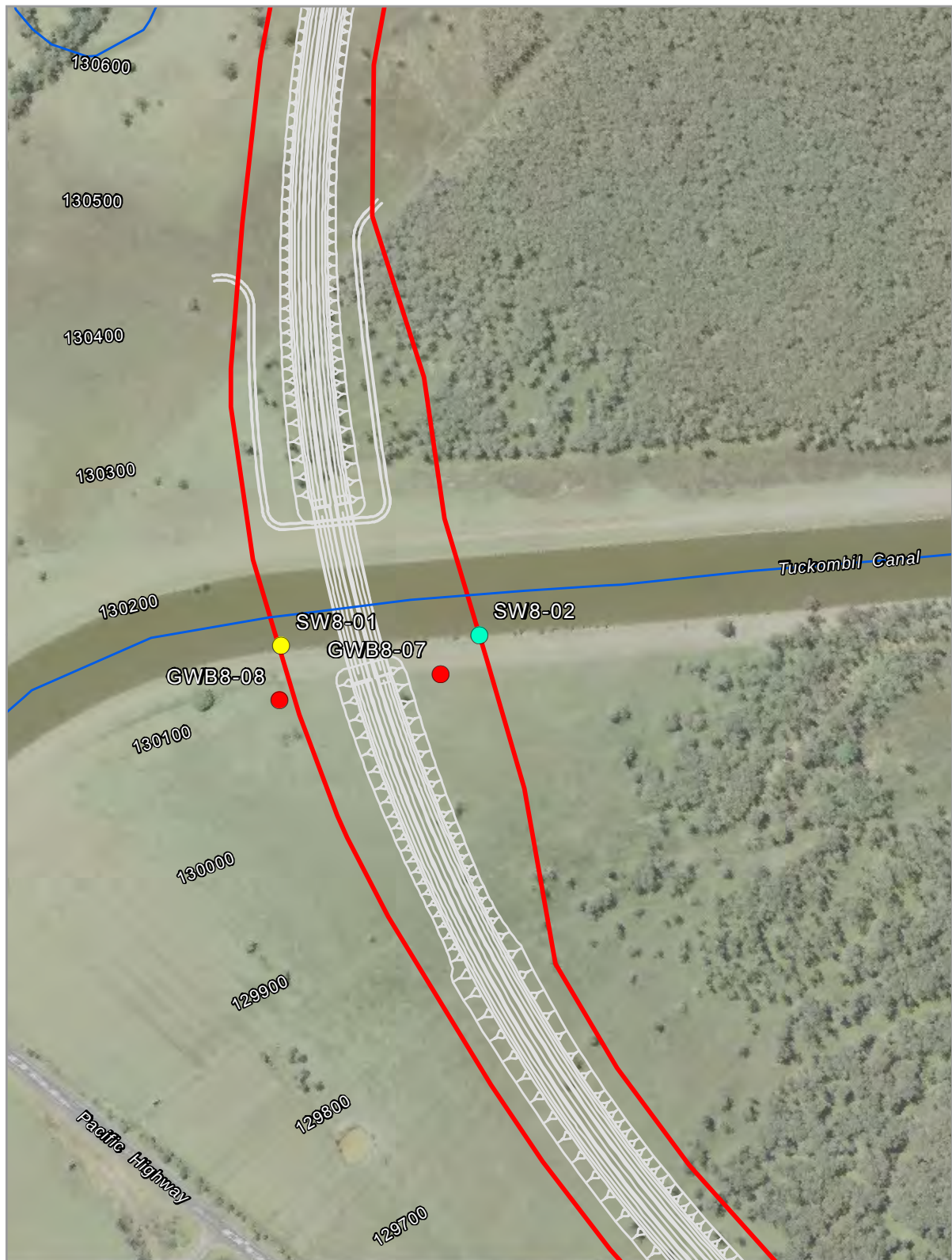
LEGEND

- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels only

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





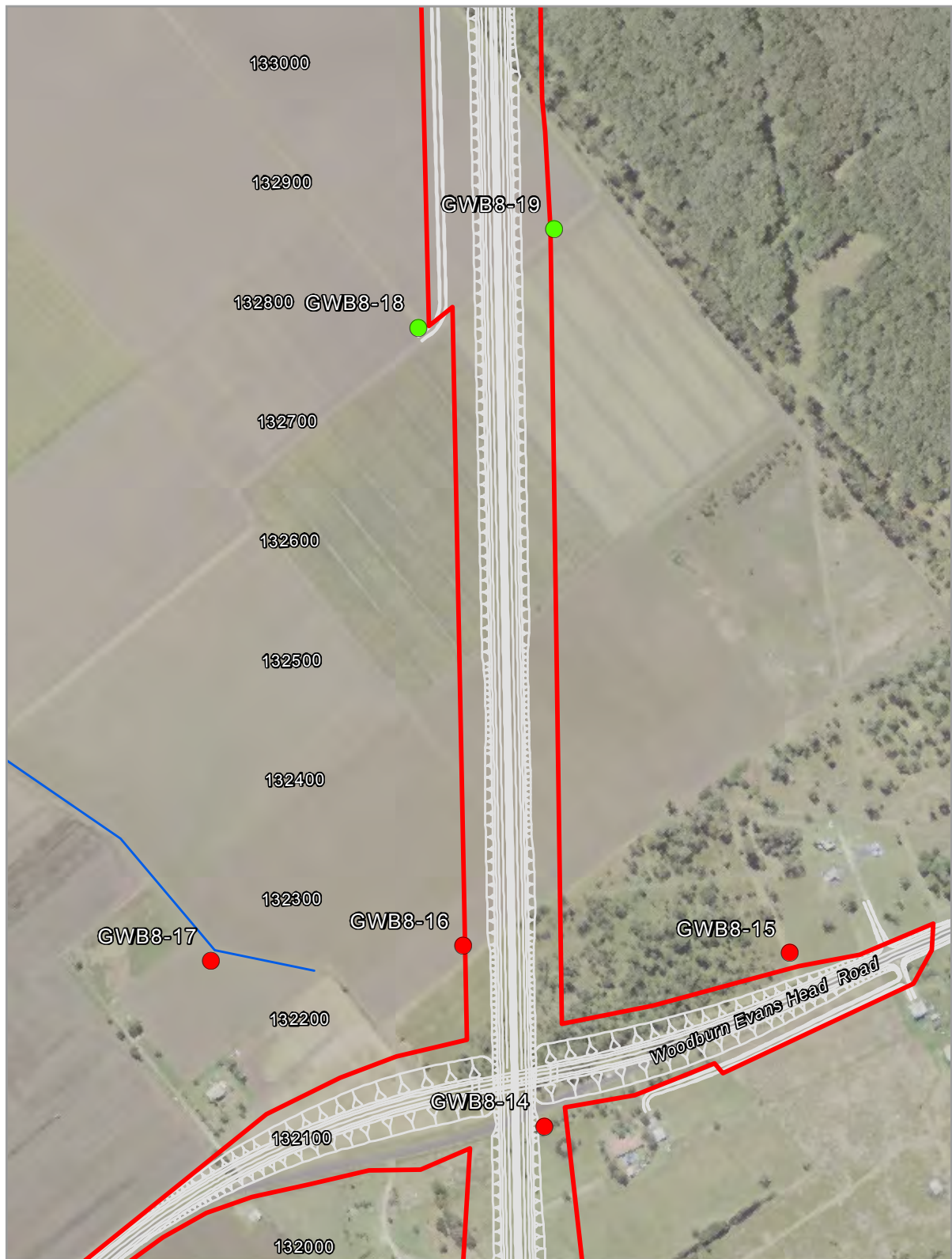
LEGEND

 Approved Project Boundary	● Groundwater monitoring - levels and quality
— Watercourse	● Downstream surface water monitoring point
	● Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

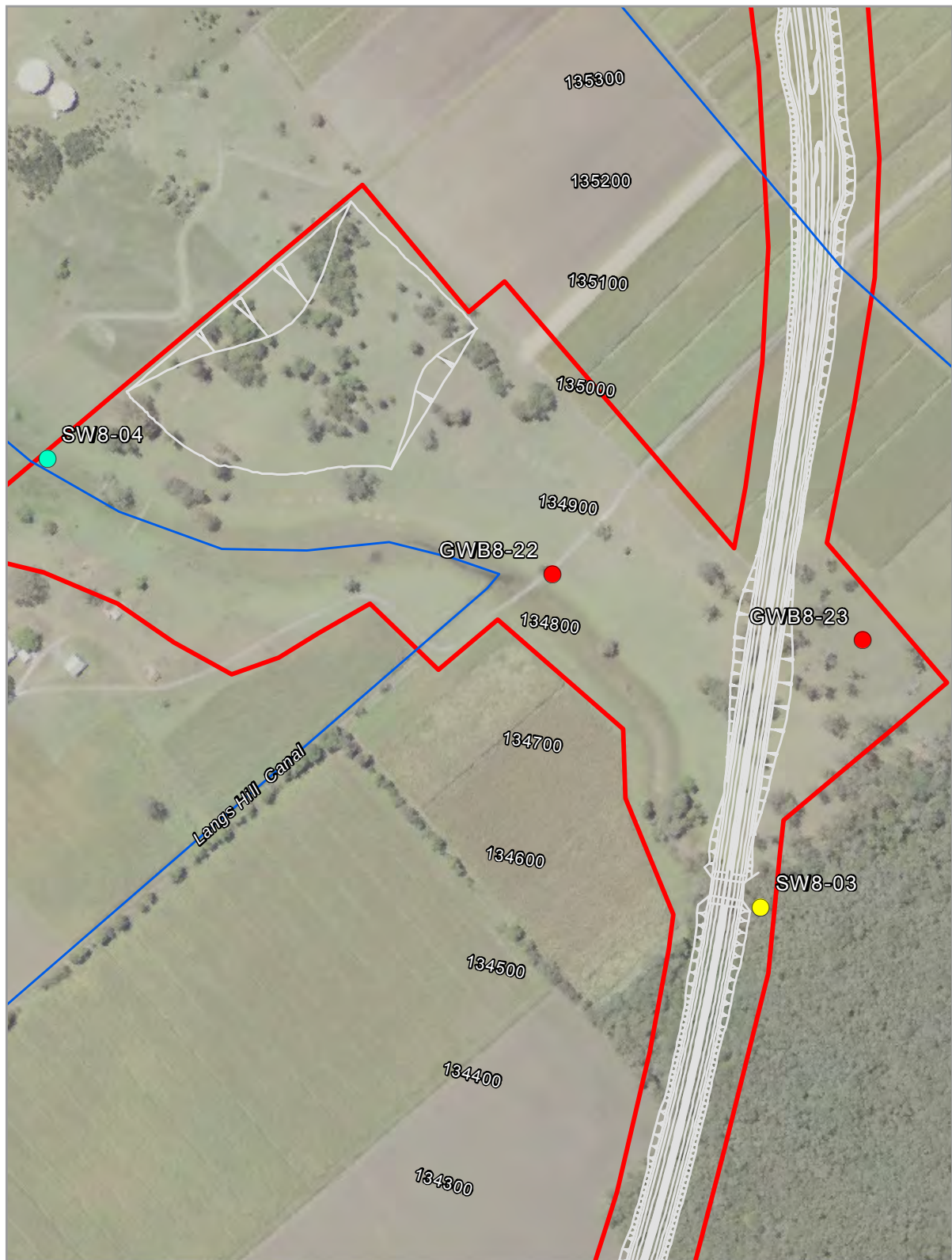
- Approved Project Boundary
- Watercourse

- Groundwater monitoring - levels only
- Groundwater monitoring - levels and quality

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

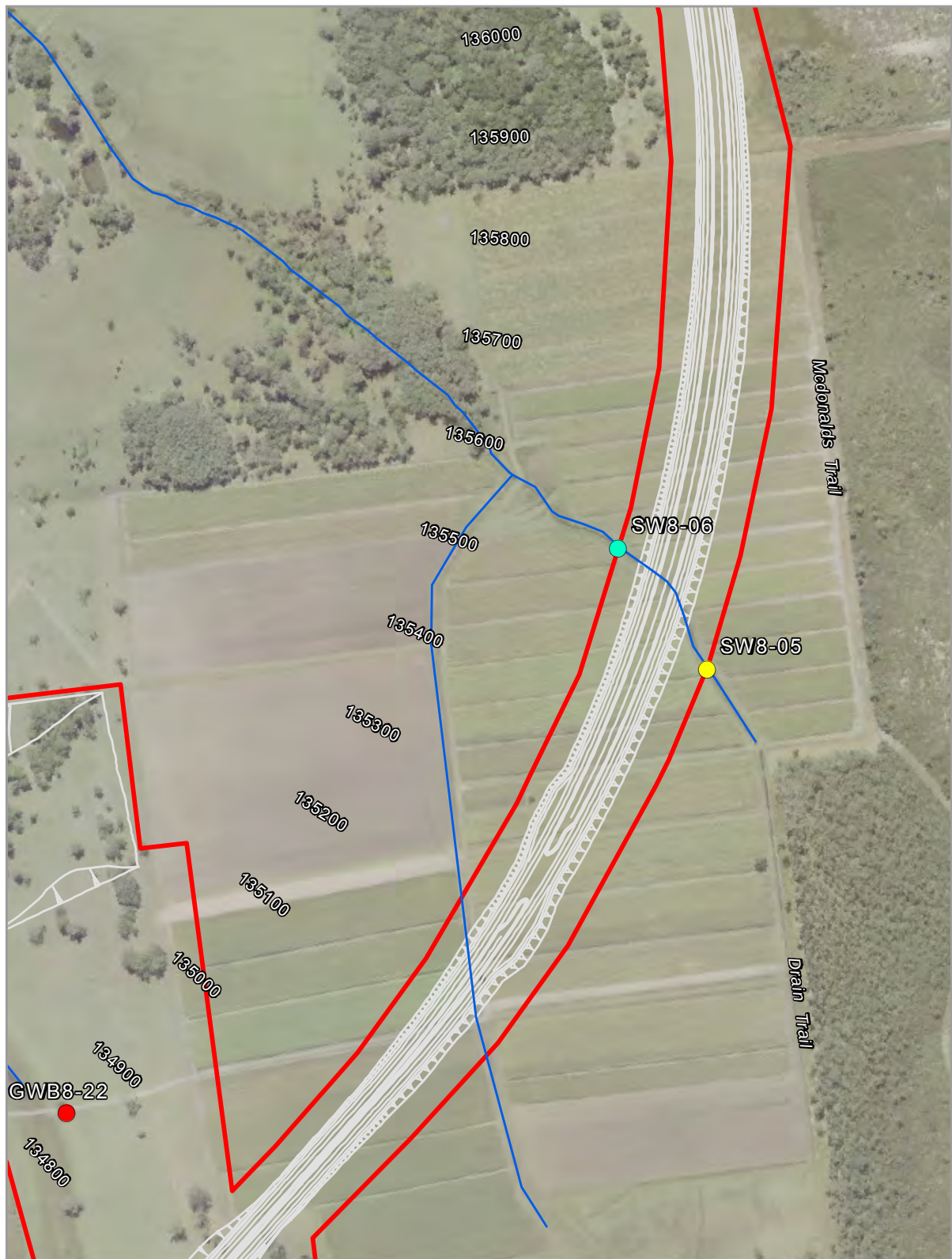
- Approved Project Boundary
- Watercourse

- Groundwater monitoring - levels and quality
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

 Approved Project Boundary	● Groundwater monitoring - levels and quality
— Watercourse	● Downstream surface water monitoring point
	● Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations



LEGEND

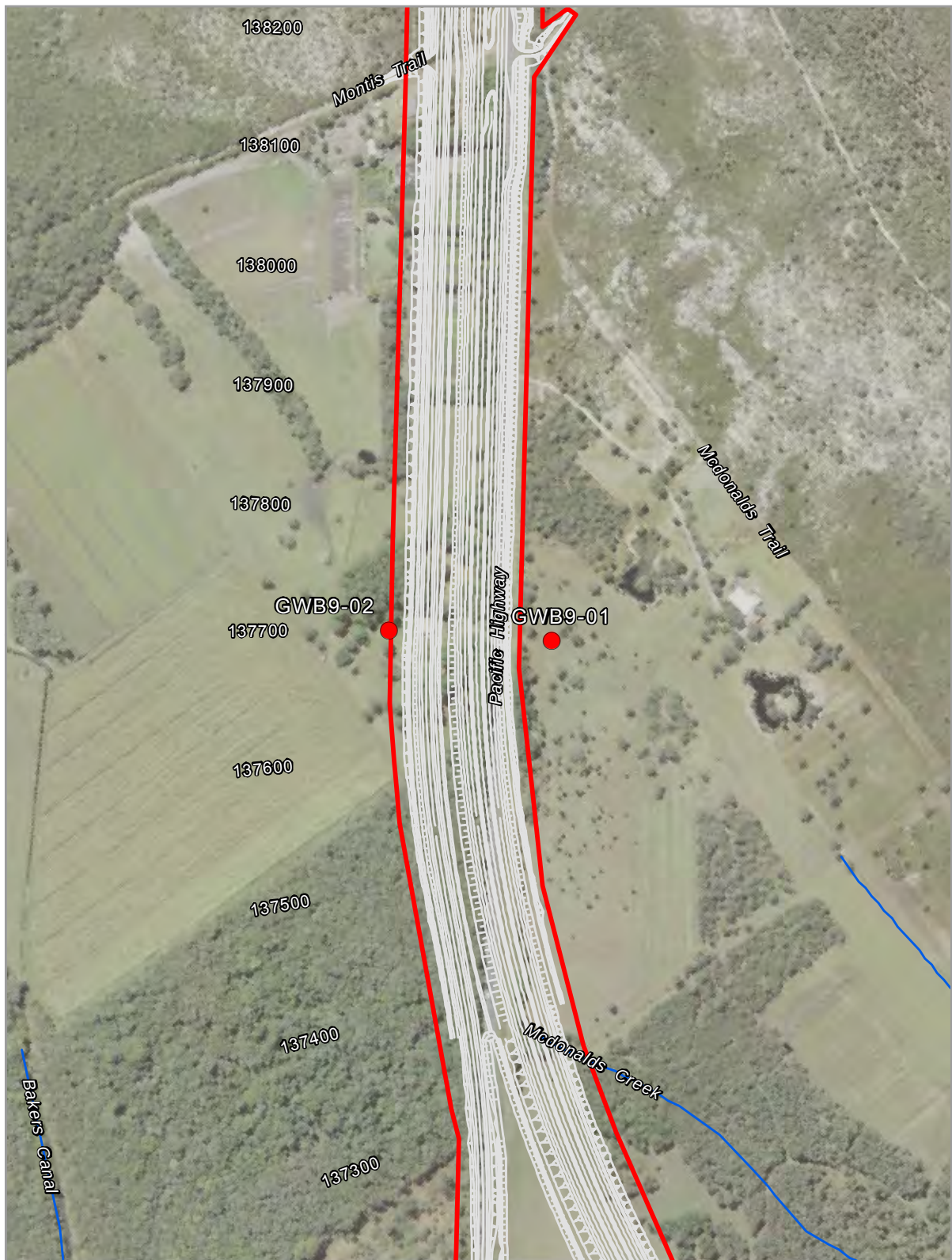
- Approved Project Boundary
- Watercourse

- Groundwater monitoring - levels only
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





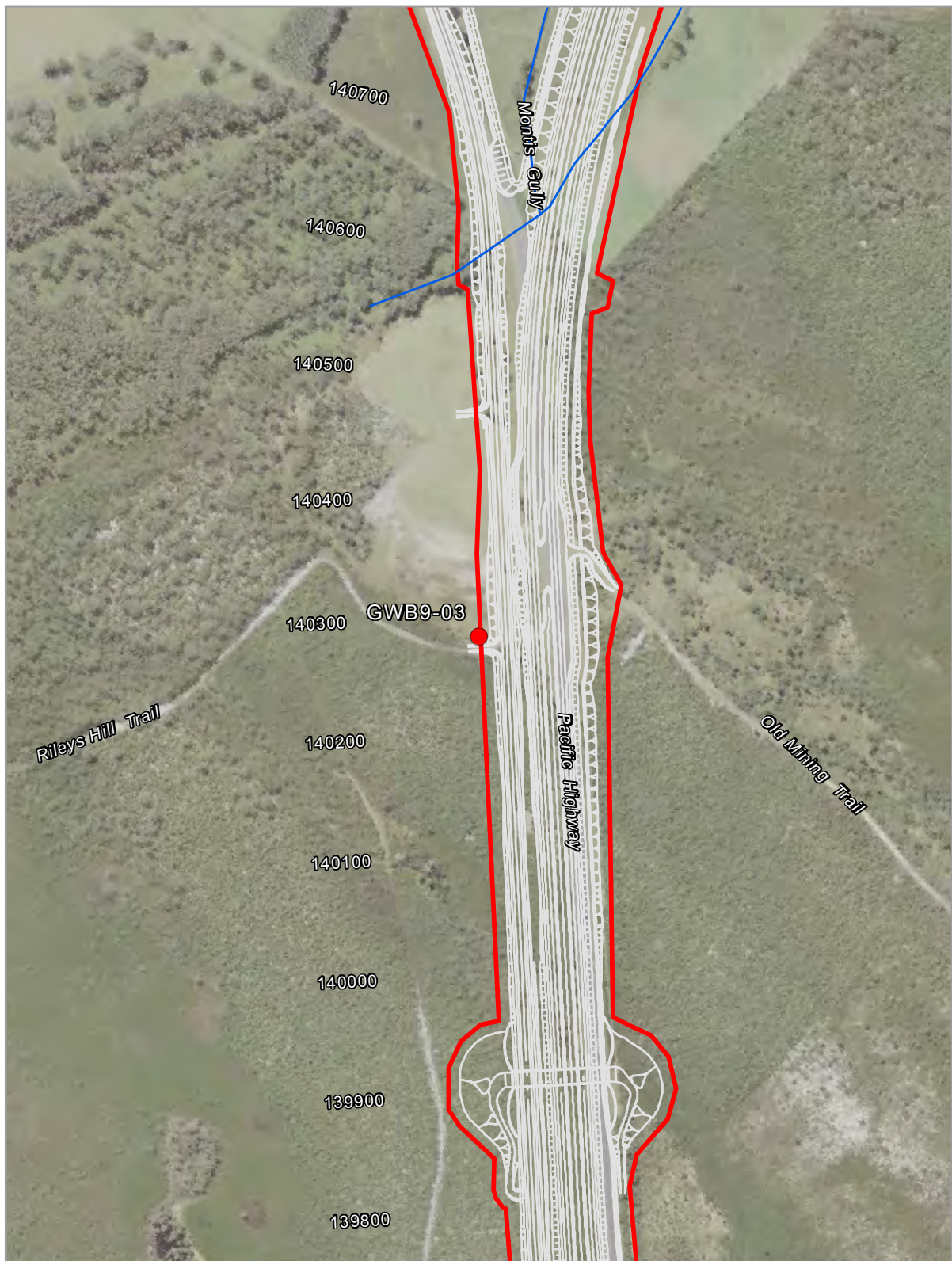
LEGEND

- Approved Project Boundary
- Groundwater monitoring - levels and quality
- Watercourse

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





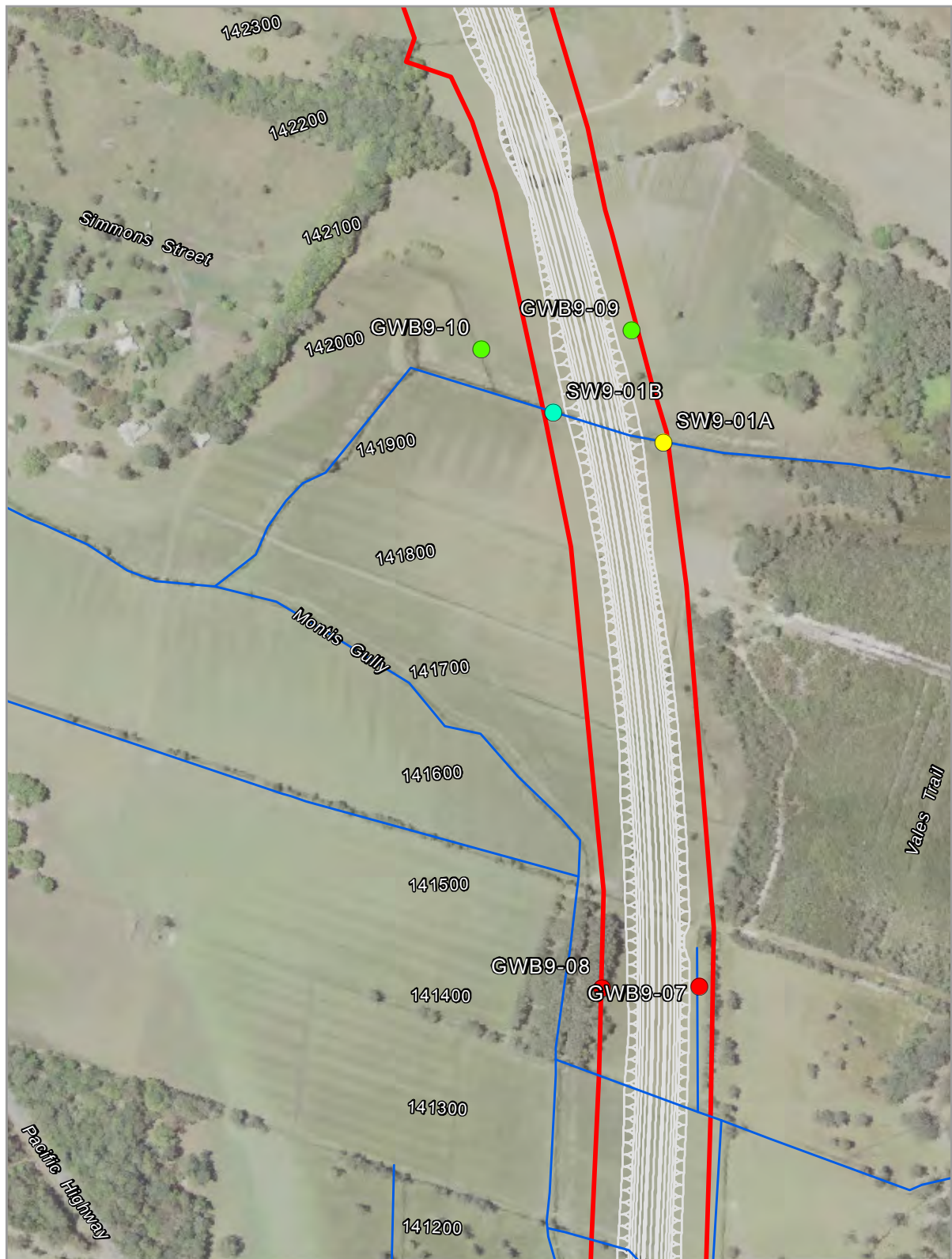
LEGEND

- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels and quality

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

- Approved Project Boundary
- Watercourse

- Groundwater monitoring - levels only
- Groundwater monitoring - levels and quality
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





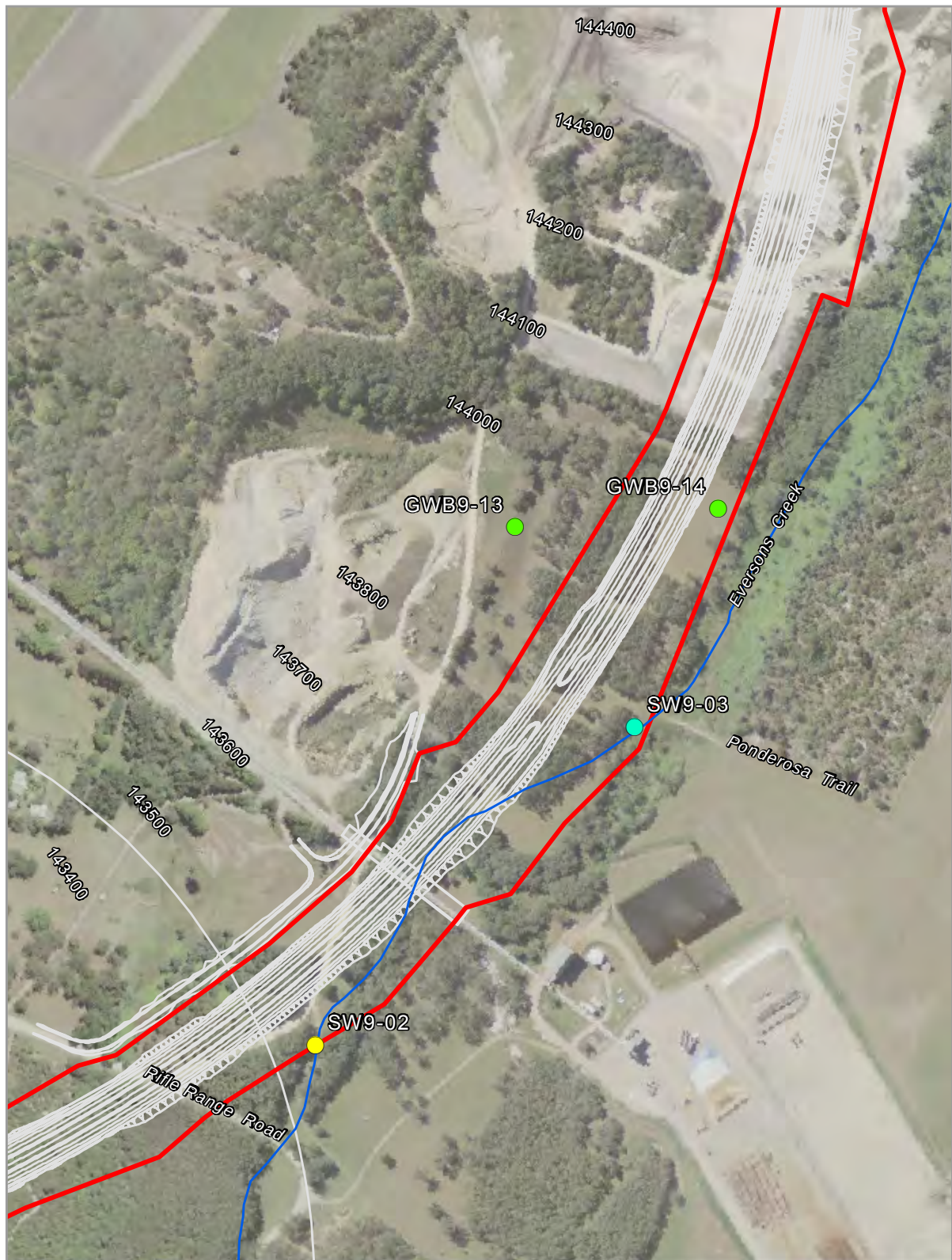
LEGEND

- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels only

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





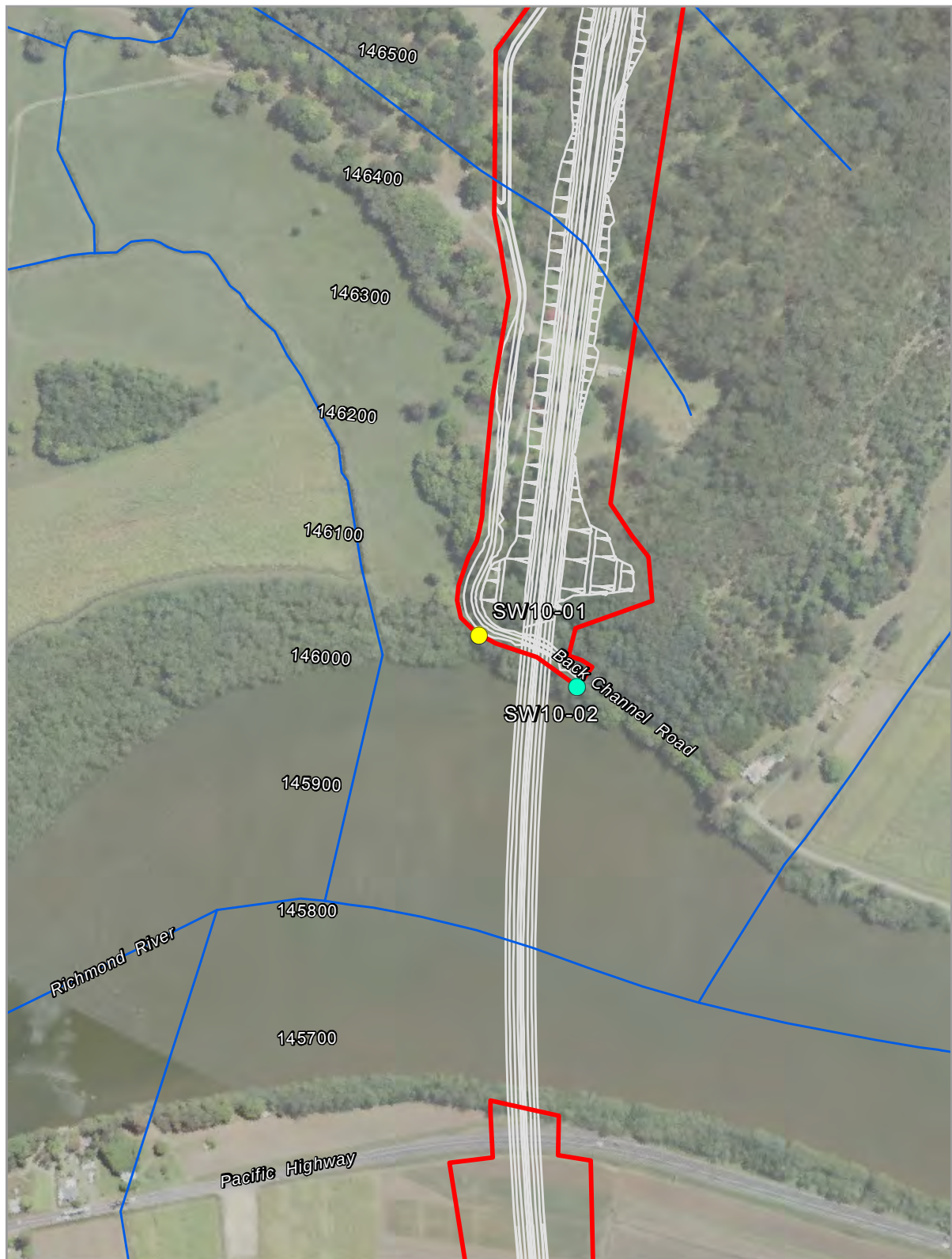
LEGEND

 Approved Project Boundary	● Groundwater monitoring - levels only
— Watercourse	● Downstream surface water monitoring point
	● Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





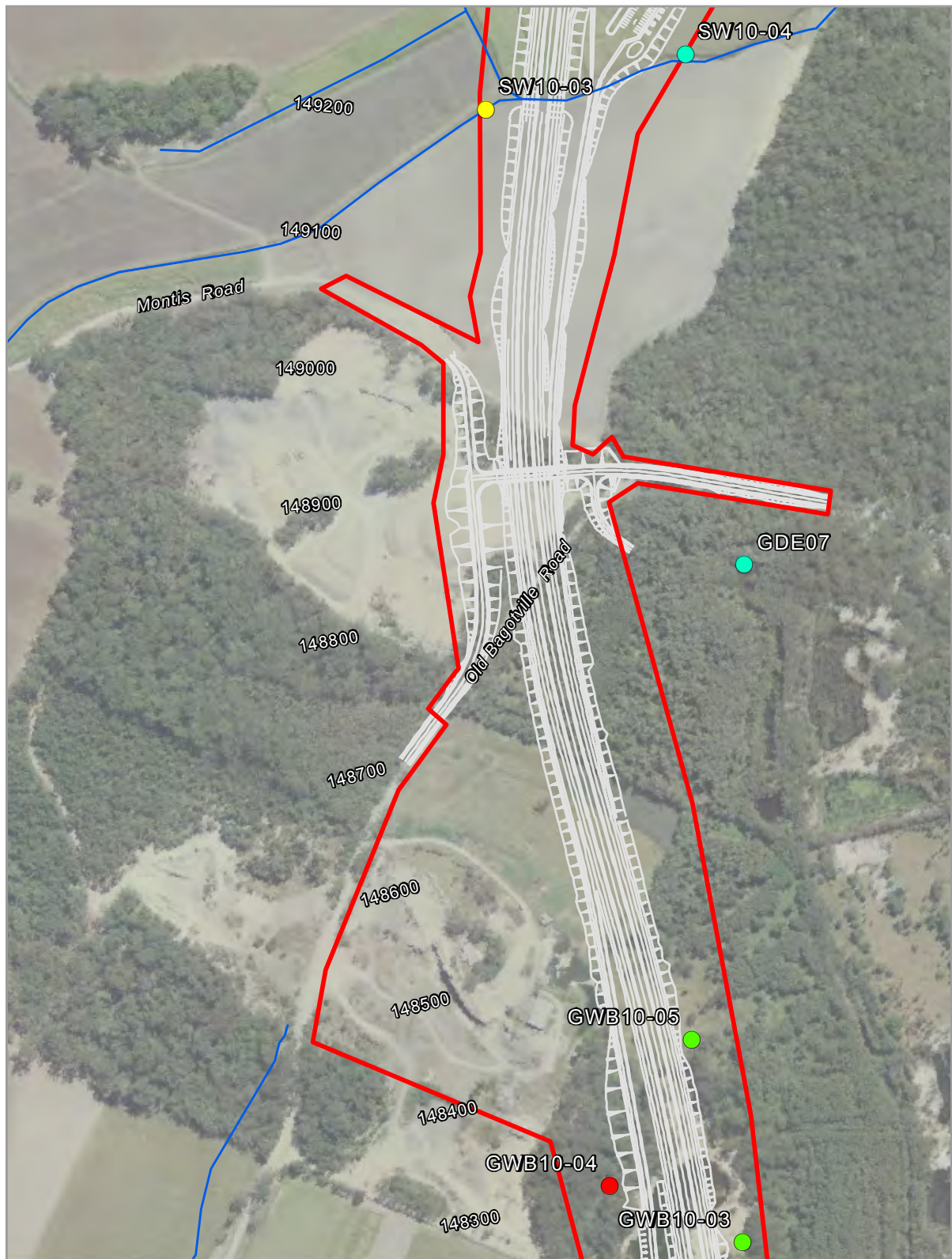
LEGEND

 Approved Project Boundary	● Downstream surface water monitoring point
— Watercourse	● Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

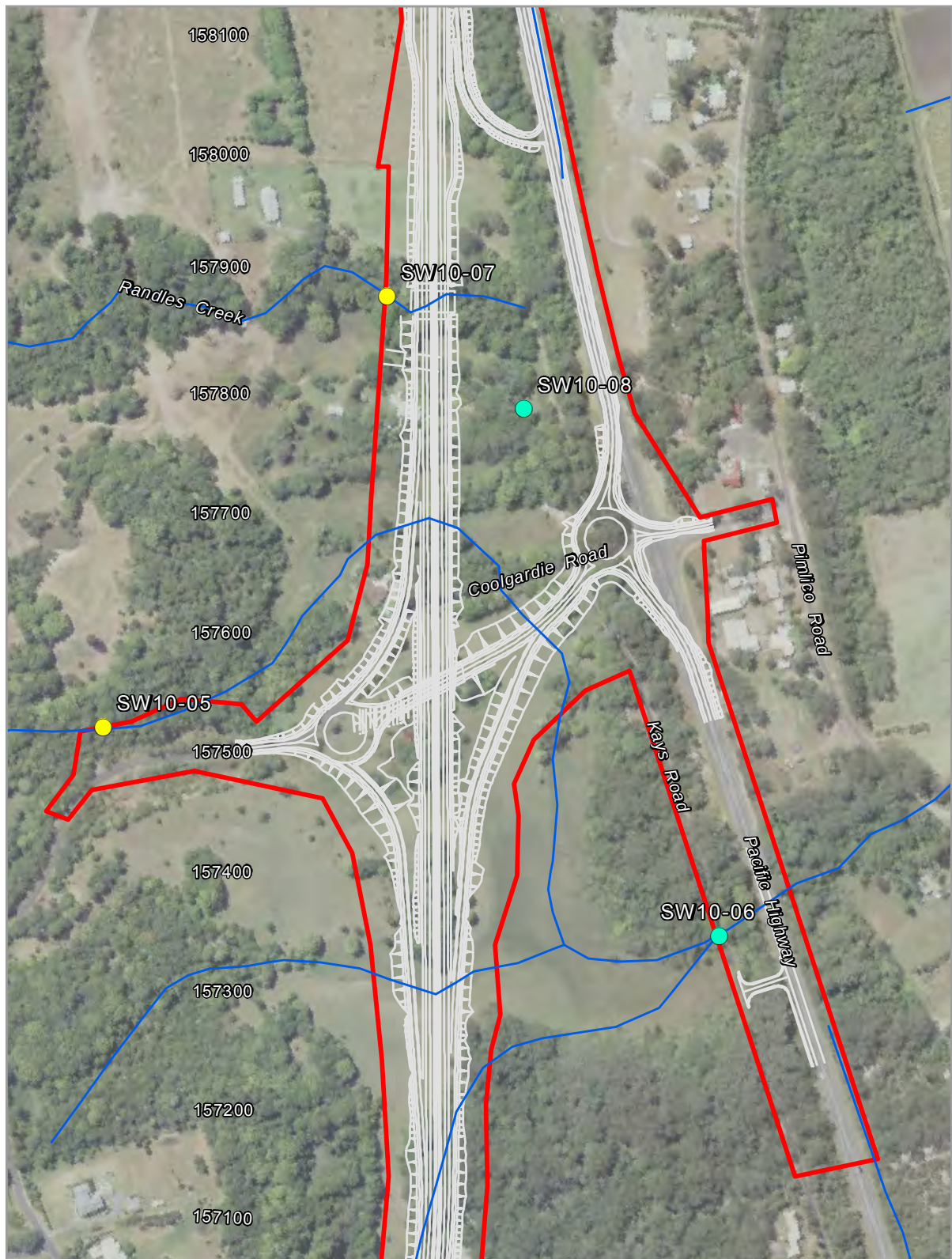
- Approved Project Boundary
- Watercourse

- Groundwater monitoring - levels only
- Groundwater monitoring - levels and quality
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





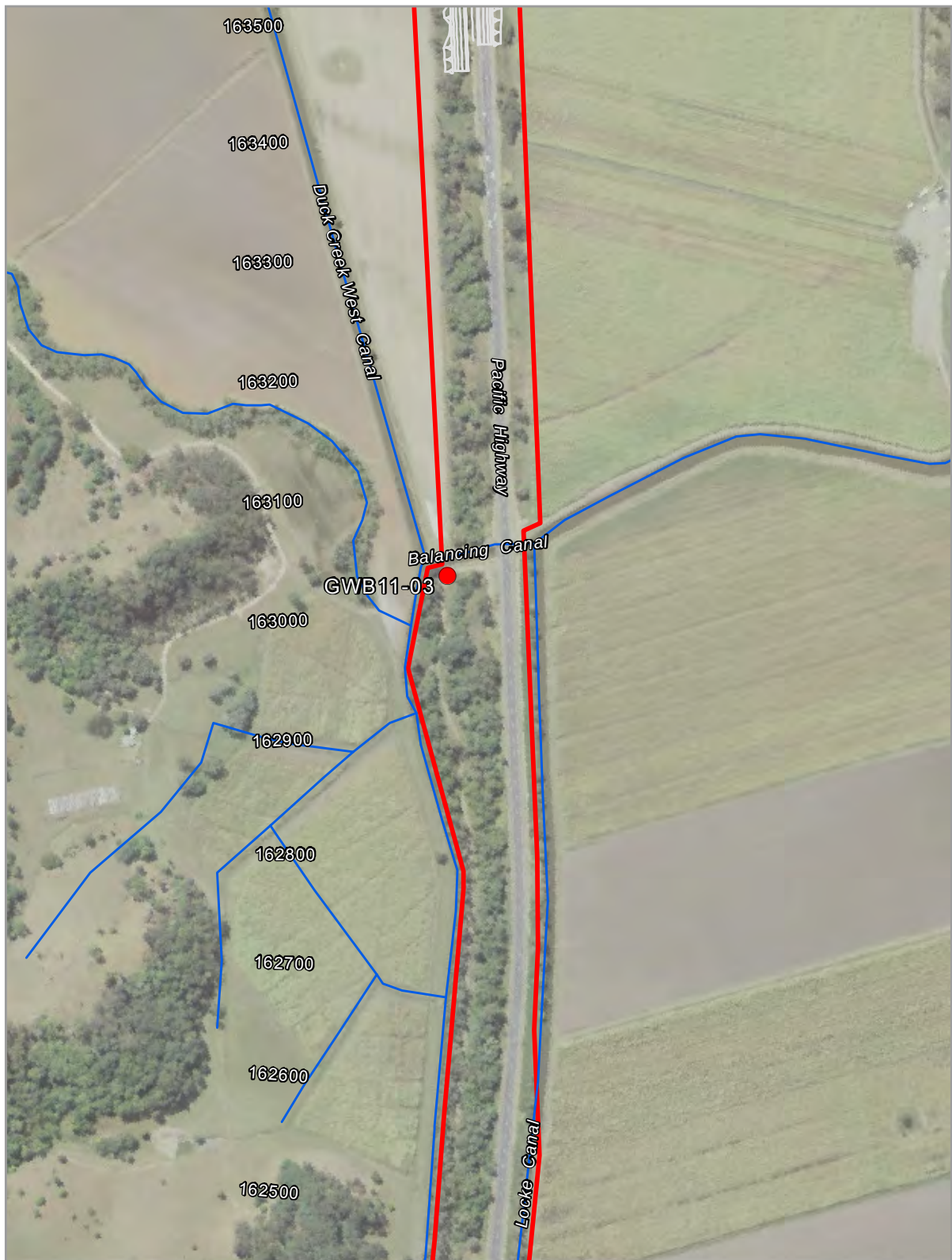
LEGEND

- Approved Project Boundary
- Watercourse

- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations



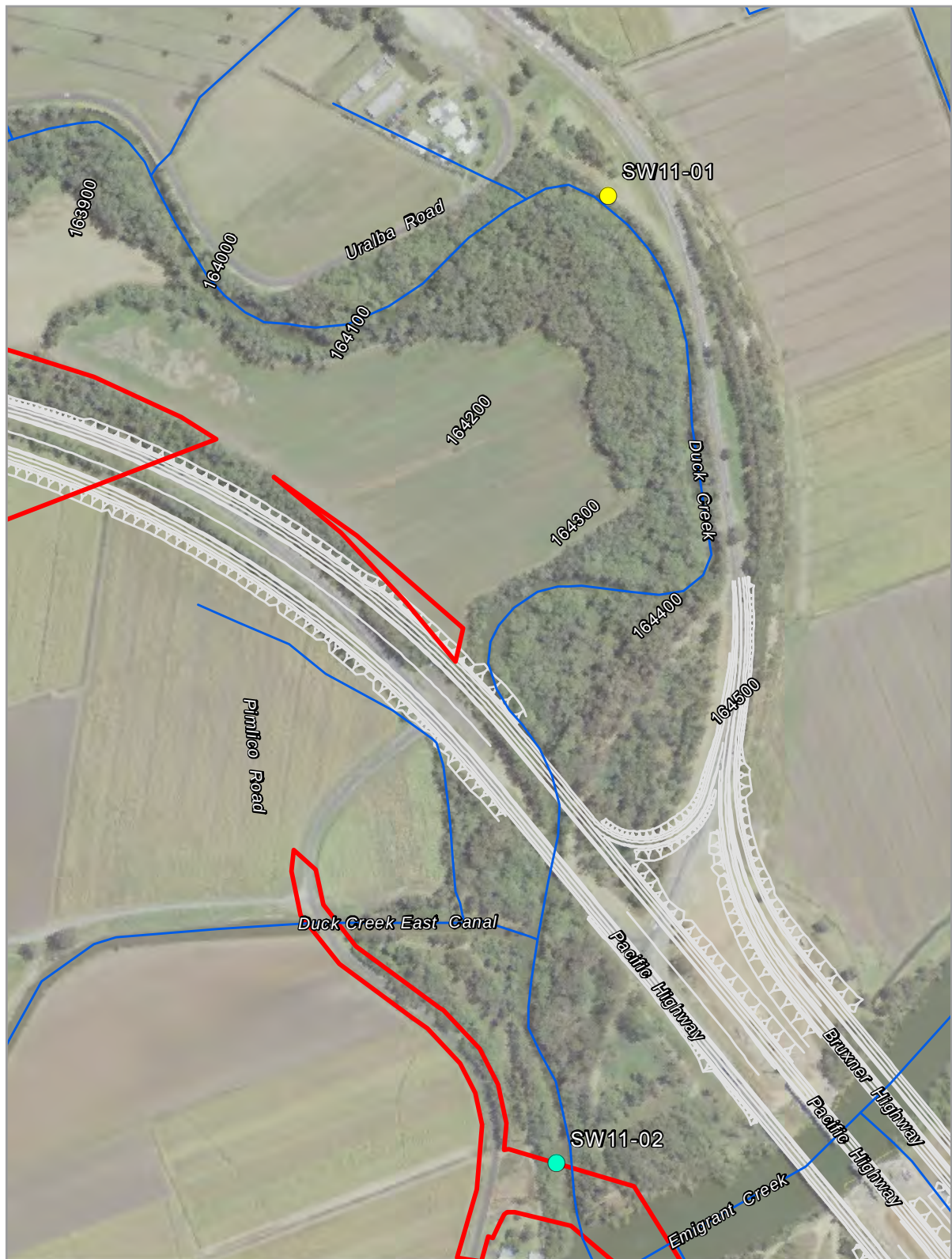
LEGEND

- Approved Project Boundary
- Watercourse
- Groundwater monitoring - levels and quality

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations





LEGEND

- ▭ Approved Project Boundary
- Watercourse
- Downstream surface water monitoring point
- Upstream surface water monitoring point

0 100

Woolgoolga to Ballina Sections 3-11 SW and GW Monitoring Locations



Appendix B

Surface Water Quality: Results of Interest

Surface Water Quality Table of Results of Interest

<i>Site</i>	<i>Date</i>	<i>Time</i>	<i>Wet or Dry Event</i>	<i>Results of Interest</i>	<i>U/S Results</i>	<i>P20 / P80</i>	<i>Field Notes / Comments</i>
Portion A							
SW3-02	10/11/2021	10:52	Wet	EC = 0.27 mS/cm	0.12	0.26	Upstream and downstream sites not connected. No visible flow. Medium water level. Overcast.
SW3-02	17/11/2021	10:49	Dry	EC = 0.32 mS/cm	0.14	0.26	Upstream and downstream not connected. No visible flow. Medium water level. Overcast.
SW3-02	5/05/2022	11:06	Dry	TP = 0.15 mg/L	0.08	0.07	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.
SW3-02	4/07/2022	10:52	Wet	EC = 0.60 mS/cm Manganese = 0.130 mg/L	0.18 0.043	0.26 0.111	Upstream and downstream sites not connected. Very low flow, medium water level. Overcast.
SW3-04	17/11/2021	10:22	Dry	pH = 8.61	N/A	7.33	Upstream and downstream not connected. No visible flow. Low water level. Overcast. Upstream insufficient water to sample.
SW3-04	5/05/2022	10:52	Dry	Aluminium = 0.440 mg/L Copper = 0.003 mg/L Iron = 0.460 mg/L Manganese = 0.120 mg/L	0.340 0.002 0.120 0.006	0.340 0.002 0.120 0.006	Likely to be connected. Very low flow, low water level. Drizzle.
SW3-04	4/07/2022	15:29	Wet	Manganese = 0.130 mg/L	0.011	0.095	Upstream and downstream sites connected. Very low flow, low water level. Overcast.
SW3-06	10/11/2021	11:06	Wet	Aluminium = 15.700 mg/L Chromium = 0.004 mg/L Iron = 6.450 mg/L	14.800 0.003 6.260	11.522 0.002 4.956	Upstream and downstream connected. Very low flow. Medium water level. Overcast.
SW3-06	17/11/2021	11:02	Dry	Aluminium = 11.800 mg/L Chromium = 0.003 mg/L Copper = 0.005 mg/L Zinc = 0.012 mg/L	6.390 0.001 0.003 0.011	5.606 0.001 0.003 0.011	Upstream and downstream connected. No visible flow. Medium level. Overcast.

Site	Date	Time	Wet or Dry Event	Results of Interest	U/S Results	P20 / P80	Field Notes / Comments
SW3-06	4/07/2022	10:34	Wet	Manganese = 0.190 mg/L	0.13	0.118	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.
SW3-08	10/11/2021	11:23	Wet	Aluminium = 2.870 mg/L	2.79	2.63	Upstream and downstream connected. Low flow. Medium water level. Overcast.
SW3-08	9/05/2022	11:55	Dry	pH = 8.09	7.40	7.17	Upstream and downstream sites connected. Very low flow, high water level. Weather fine.
SW3-10	18/11/2021	9:39	Dry	Aluminium = 1.560 mg/L	1.12	1.432	Upstream and downstream connected. Low flow. Low water level. Overcast.
SW3-12	5/05/2022	11:57	Dry	Zinc = 0.007 mg/L	0.005	0.005	Upstream and downstream sites connected. Medium flow, low water level. Overcast.
SW3-14	10/11/2021	11:45	Wet	Zinc = 0.018 mg/L	0.009	0.007	Upstream and downstream connected. Low flow. Low water level. Overcast.
SW3-14	17/11/2021	11:45	Dry	Aluminium = 7.150 mg/L Chromium = 0.004 mg/L Iron = 5.440 mg/L Zinc = 0.011 mg/L	5.080 0.003 4.860 0.006	4.500 0.003 4.322 0.008	Upstream and downstream connected. Very low flow. Low water level. Overcast.
SW3-14	5/05/2022	12:13	Dry	Zinc = 0.008 mg/L	0.005	0.007	Upstream and downstream sites connected. Low flow, low water level. Overcast.
SW3-16	10/11/2021	12:05	Wet	Manganese = 0.063 mg/L	0.061	0.062	Upstream and downstream connected. Very low flow. Medium water level. Overcast.
SW3-16	4/07/2022	11:56	Wet	Turbidity = 60 NTU	48	48	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.

[illegible]

Site	Date	Time	Wet or Dry Event	Results of Interest	U/S Results	P20 / P80	Field Notes / Comments
SW5-03	4/05/2022	11:59	Dry	TP = 0.48 mg/L Aluminium = 0.390 mg/L	0.39 0.350	0.30 0.320	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.
SW5-04	11/11/2021	11:07	Wet	Turbidity = 119 NTU Iron = 8.670 mg/L Manganese = 0.740 mg/L Nickel = 0.008 mg/L Zinc = 0.025 mg/L	20 3.950 0.340 0.007 0.010	116 3.886 0.354 0.005 0.009	Upstream and downstream connected. No visible flow. Medium water level. Outgoing tide. Overcast.
SW5-05	11/11/2021	11:30	Wet	Arsenic = 0.002 mg/L Nickel = 0.008 mg/L	0.001 0.007	0.001 0.005	Upstream and downstream connected. Medium flow. Medium water level. Incoming tide. Overcast.
SW5-05	18/11/2021	11:39	Dry	Nickel = 0.006 mg/L	0.003	0.003	Upstream and downstream connected. Medium flow. Medium water level. Incoming tide. Overcast.
SW5-06	23/05/2022	8:23	Wet	Oil & Grease = 9 mg/L	1	3	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Drizzle.
SW5-07	11/11/2021	12:25	Wet	Zinc = 0.660 mg/L	0.005	0.086	Upstream and downstream connected. Medium flow. Medium water level. Incoming tide. Drizzle.
SW5-07	18/11/2021	11:52	Dry	Zinc = 1.720 mg/L	0.005	0.146	Upstream and downstream connected. Low flow. Medium water level. Incoming tide. Overcast.
SW5-07	4/05/2022	12:52	Dry	Manganese = 0.300 mg/L	0.240	0.256	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.
SW5-09	4/05/2022	13:27	Dry	Aluminium = 1.730 mg/L Copper = 0.003 mg/L Iron = 1.540 mg/L	1.550 0.002 1.400	1.656 0.002 1.512	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.

Site	Date	Time	Wet or Dry Event	Results of Interest	U/S Results	P20 / P80	Field Notes / Comments
SW5-11	11/11/2021	12:46	Wet	DO = 2.55 mg/L pH = 7.83 Aluminium = 0.250 mg/L Arsenic = 0.002 mg/L Cadmium = 0.0010 mg/L Copper = 0.002 mg/L Iron = 3.000 mg/L Lead = 0.005 mg/L Manganese = 0.370 mg/L Nickel = 0.003 mg/L Silver = 0.0015 mg/L	N/A	5.38 6.19 0.100 0.001 0.0001 0.001 0.300 0.001 0.260 0.001 0.0001	Unable to determine if connected. No visible flow. Medium water level. Incoming tide. Rain. No Upstream monitoring site.
SW5-11	18/11/2021	12:21	Dry	DO = 3.36 mg/L EC = 7.02 mS/cm pH = 8.26 Aluminium = 0.280 mg/L Arsenic = 0.002 mg/L Cadmium = 0.0010 mg/L Copper = 0.002 mg/L Iron = 3.430 mg/L Lead = 0.005 mg/L Manganese = 0.280 mg/L Nickel = 0.003 mg/L Silver = 0.0015 mg/L	N/A	4.75 4.86 6.66 0.090 0.001 0.0001 0.001 0.290 0.001 0.120 0.001 0.0001	Unable to determine if connected. Very low flow. Low water level. Overcast. Water stagnant. No upstream monitoring site.
SW5-11	4/05/2022	13:07	Dry	DO = 2.80 mg/L EC = 0.27 mS/cm pH = 7.47 Aluminium = 1.110 mg/L Cadmium = 0.0010 mg/L Copper = 0.002 mg/L Iron = 3.030 mg/L Lead = 0.005 mg/L Manganese = 0.270 mg/L Nickel = 0.003 mg/L Silver = 0.0005 mg/L	N/A	4.75 0.36 6.66 0.090 0.0001 0.001 0.290 0.001 0.120 0.001 0.0001	No upstream site. No visible flow, low water level. Weather fine.

Site	Date	Time	Wet or Dry Event	Results of Interest	U/S Results	P20 / P80	Field Notes / Comments
SW5-11	23/05/2022	9:26	Wet	EC = 0.10 mS/cm DO = 5.00 mg/L pH = 6.32 Turbidity = 46 NTU Aluminium = 0.971 mg/L Cadmium = 0.0005 mg/L Iron = 0.914 mg/L Mercury = 0.0003 mg/L Silver = 0.0005 mg/L	N/A	0.39 5.38 6.19 31 0.100 0.0001 0.300 0.0001 0.0001	No upstream site. Medium flow, high water level. Overcast.
Portion C							
SW6-04	23/11/2021	11:54	Dry	Arsenic = 0.002 mg/L Copper = 0.002 mg/L	0.001 0.001	0.001 0.001	Upstream and downstream connected. Medium flow. Medium water level. Overcast.
SW6-04	23/05/2022	10:23	Wet	Nickel = 0.002 mg/L	0.001	0.001	Upstream and downstream sites connected. High flow, high water level. Rain.
SW6-06	11/11/2021	11:35	Wet	Manganese = 0.066 mg/L Zinc = 0.022 mg/L	0.048 0.020	0.045 0.016	Upstream and downstream connected. Very low flow. Medium water level. Overcast.
SW6-06	23/11/2021	12:16	Dry	Selenium = 0.002 mg/L	0.001	0.001	Upstream and downstream connected. No visible flow. Medium water level. Overcast.
SW7-02	23/11/2021	11:18	Dry	EC = 0.26 mS/cm Copper = 0.002 mg/L Manganese = 0.099 mg/L Zinc = 0.020 mg/L	0.08 0.001 0.028 0.005	0.11 0.001 0.041 0.006	Unable to determine if connected. No visible flow. Medium water level. Drizzle.
SW7-02	20/05/2022	9:29	Dry	pH = 4.80 Zinc = 0.016	5.38 0.012	5.70 0.009	Unable to determine if connected. No visible flow, medium water level. Overcast
SW7-02	16/05/2022	11:21	Wet	Aluminium = 1.895 mg/L Iron = 1.245 mg/L Zinc = 0.015 mg/L	1.356 1.047 0.008	1.798 1.145 0.011	Unable to determine if connected. High flow, high water level. Weather Fine.
SW7-04	9/11/2021	11:52	Wet	Zinc = 0.010 mg/L	0.009	0.005	Upstream and downstream connected. No visible flow. Low water level. Weather fine.

Site	Date	Time	Wet or Dry Event	Results of Interest	U/S Results	P20 / P80	Field Notes / Comments
SW7-04	23/11/2021	13:11	Dry	Zinc = 0.008 mg/L	0.006	0.005	Upstream and downstream connected. No visible flow. Medium water level. Overcast.
SW7-04	20/05/2022	10:29	Dry	Zinc = 0.014 mg/L	0.008	0.006	Upstream and downstream sites connected. Very low flow, high water level. Overcast.
SW7-04	16/05/2022	13:19	Wet	Iron = 0.950 mg/L Zinc = 0.009 mg/L	0.918 0.005	0.939 0.008	Upstream and downstream sites connected. High flow, high water level. Overcast.
SW7-06	9/11/2021	12:11	Wet	EC = 0.24 mS/cm pH = 6.93 Copper = 0.002 mg/L Manganese = 0.214 mg/L	0.14 5.89 0.001 0.111	0.18 6.75 0.001 0.115	Unable to determine if connected. No visible flow. Low water level. Weather fine.
SW7-06	23/11/2021	13:30	Dry	Iron = 2.135 mg/L Manganese = 0.322 mg/L	1.623 0.105	1.395 0.164	Unable to determine if connected. No visible flow. Medium water level. Weather fine.
SW7-06	20/05/2022	11:01	Dry	Iron = 1.820 mg/L Zinc = 0.009 mg/L	1.542 0.005	1.558 0.003	Unable to determine if connected. Low flow, high water level. Overcast
SW7-06	16/05/2022	13:41	Wet	SS = 36 mg/L Iron = 2.062 mg/L Manganese = 0.176 mg/L Zinc = 0.014 mg/L	17 1.195 0.048 0.004	19 1.291 0.113 0.006	Upstream and downstream sites connected. Very low flow, high water level. Overcast.
SW7-08	9/11/2021	12:37	Wet	EC = 0.44 mS/cm Turbidity = 29 NTU SS = 37 mg/L TP = 0.12 mg/L TN = 1.80 mg/L Cadmium = 0.0015 mg/L Copper = 0.003 mg/L Iron = 2.240 mg/L Manganese = 1.179 mg/L Nickel = 0.002 mg/L Zinc = 0.020 mg/L	N/A	0.39 15 13 0.06 1.23 0.0005 0.001 1.673 0.058 0.001 0.006	Upstream and downstream connected. No visible flow. Low water level. Weather fine. Insufficient water to sample in upstream site.

Site	Date	Time	Wet or Dry Event	Results of Interest	U/S Results	P20 / P80	Field Notes / Comments
SW7-08	23/11/2021	13:52	Dry	Chromium = 0.002 mg/L	0.001	0.001	Upstream and downstream connected. No visible flow. Medium water level. Drizzle.
SW7-08	20/05/2022	11:22	Dry	Iron = 2.751 mg/L Zinc = 0.009 mg/L	2.234 0.008	2.030 0.007	Upstream and downstream sites connected. No visible flow, high water level. Overcast. Monitored within works area.
SW7-08	16/05/2022	14:03	Wet	Iron = 2.320 mg/L	2.033	1.978	Upstream and downstream sites connected. Very flow, high water level. Overcast. Monitored within works area.
SW8-01	20/05/2022	11:54	Dry	Iron = 1.856 mg/L	1.844	1.342	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Overcast.
SW8-02	11/11/2021	12:12	Wet	Arsenic = 0.002 mg/L	0.001	0.001	Upstream and downstream connected. High flow. Medium water level. Outgoing tide. Overcast.
SW8-04	20/05/2022	12:22	Dry	Manganese = 0.038 mg/L Zinc = 0.024 mg/L	0.37 0.006	0.032 0.005	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.
SW8-04	17/05/2022	10:58	Wet	Turbidity = 27 NTU Zinc = 0.041 mg/L	8 0.006	12 0.016	Upstream and downstream sites not connected. Very low flow, high water level. Overcast.
SW8-06	11/11/2021	13:19	Wet	DO = 3.62 mg/L Turbidity = 55 NTU Manganese = 0.028 mg/L	9.61 11 0.017	4.16 28 0.022	Upstream and downstream connected. Medium flow. Medium water level. Overcast.
SW8-06	24/11/2021	13:29	Dry	SS = 37 mg/L Aluminium = 1.238 mg/L Arsenic 0.007 mg/L Iron = 7.273 mg/L Manganese = 0.025 mg/L Zinc = 0.005 mg/L	7 0.456 0.002 0.642 0.019 0.002	33 0.608 0.001 1.200 0.017 0.002	Upstream and downstream connected. Medium flow. Medium water level. Overcast.
SW8-06	20/05/2022	12:58	Dry	Zinc = 0.019 mg/L	0.005	0.004	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.

Site	Date	Time	Wet or Dry Event	Results of Interest	U/S Results	P20 / P80	Field Notes / Comments
SW8-06	17/05/2022	11:37	Wet	Aluminium = 0.717 mg/L Zinc = 0.025 mg/L	0.700 0.012	0.700 0.016	Upstream and downstream sites connected. High flow, high water level. Overcast.
SW8-08	11/11/2021	13:33	Wet	pH = 5.65 TRH>C16-C34 Fraction = 310 ug/L Chromium = 0.002 Copper = 0.002 mg/L Iron = 1.715 mg/L Manganese = 0.092 mg/L Nickel = 0.003 mg/L	4.32 100 0.001 0.001 0.946 0.010 0.002	4.72 100 0.001 0.001 0.842 0.023 0.002	Upstream and downstream connected. No visible flow. Medium water level. Overcast.
SW8-08	24/11/2021	13:01	Dry	pH = 5.31 SS = 107 mg/L Iron = 2.396 mg/L Manganese = 0.054 mg/L	4.38 1 0.612 0.014	4.81 25 0.888 0.014	Upstream and downstream connected. No visible flow. Medium water level. Overcast.
SW8-08	20/05/2022	13:21	Dry	Oil & grease = 6 mg/L Iron = 1.607 mg/L Manganese = 0.034 mg/L Zinc = 0.034 mg/L	1 1.344 0.020 0.006	3 1.078 0.017 0.011	Upstream and downstream sites connected. Medium flow, very high-water level. Overcast.
SW8-08	17/05/2022	11:57	Wet	Iron = 1.889 mg/L Manganese = 0.030 mg/L Zinc = 0.024 mg/L	1.601 0.020 0.008	1.077 0.024 0.015	Upstream and downstream sites connected. Medium flow, very high-water level. Overcast.
SW9-01B	11/11/2021	14:18	Wet	pH = 5.46 mg/L Turbidity = 100 NTU TRH >C16-C34 Fraction = 710 ug/L TRH >C34-C40 Fraction = 200 ug/L Manganese = 0.092 mg/L Nickel = 0.009 mg/L Zinc = 0.041 mg/L	3.90 7 100 50 0.044 0.006 0.034	5.00 23 100 50 0.068 0.006 0.033	Upstream and downstream connected. No visible flow. High water level. Drizzle.
SW9-01B	17/05/2022	8:16	Wet	Zinc = 0.046 mg/L	0.021	0.032	Upstream and downstream sites connected. Medium flow, high water level. Overcast.
SW9-03	11/11/2021	9:59	Wet	Manganese = 0.253 mg/L Nickel = 0.004 mg/L Zinc = 0.035 mg/L	0.149 0.002 0.033	0.125 0.002 0.027	Unable to determine if connected. No visible flow. Low water level. Overcast.

Site	Date	Time	Wet or Dry Event	Results of Interest	U/S Results	P20 / P80	Field Notes / Comments
SW9-03	24/11/2021	11:59	Dry	pH = 6.19 Manganese = 0.224 mg/L Selenium = 0.002 mg/L	5.75 0.147 0.001	5.00 0.127 0.001	Upstream and downstream connected. No visible flow. Medium water level. Overcast.
SW9-03	20/05/2022	7:25	Dry	Oil & Grease = 12 mg/L Manganese = 0.254 mg/L Zinc = 0.017 mg/L	7 0.053 0.007	3 0.109 0.010	Likely to be connected. Low flow, high water level. Overcast.
SW9-03	17/05/2022	7:34	Wet	Iron = 1.750 mg/L Manganese = 0.280 mg/L	1.140 0.073	1.433 0.113	Likely to be connected. Very low flow, high water level. Weather fine.
Portion D							
GDE07	12/11/2021	9:30	Wet	DO = 1.98 mg/L EC = 0.26 mg/L pH = 7.24	N/A	3.99 0.23 7.00	No visible flow. Medium water level. Drizzle. No upstream monitoring site for comparison.
GDE07	24/11/2021	10:02	Dry	EC = 0.27 mS/cm pH = 7.69 Oil & Grease = 32 mg/L	N/A	0.19 7.30 3	No visible flow. Medium water level. Overcast. No upstream monitoring site for comparison.
SW10-01	24/11/2021	9:31	Dry	Aluminium = 0.331 mg/L Iron = 0.740 mg/L	0.271 0.571	0.283 0.676	Upstream and downstream connected. Low flow. High water level. Incoming tide. Drizzle.
SW10-02	12/11/2021	8:59	Wet	SS = 73 mg/L	15	63	Upstream and downstream connected. Medium flow. High water level. Outgoing tide. Drizzle.
SW10-02	18/05/2022	11:44	Dry	Iron = 1.082 mg/L	1.055	0.869	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Weather fine.
SW10-04	12/11/2021	9:53	Wet	DO = 1.44 mg/L TN = 1.85 mg/L Arsenic = 0.002 mg/L	3.53 1.16 0.001	2.51 1.39 0.001	Upstream and downstream connected. No visible flow. Medium water level. Drizzle.
SW10-04	24/11/2021	10:23	Dry	EC = 0.45 mS/cm TN = 3.54 mg/L Aluminium = 0.721 mg/L	0.89 1.77 0.664	0.39 0.84 0.446	Upstream and downstream connected. No visible flow. Medium water level. Overcast.
SW10-06	12/11/2021	10:23	Wet	DO = 4.28 mg/L Copper = 0.002 mg/L Iron = 1.140 Manganese = 0.042 mg/L	8.93 0.001 0.511 0.011	6.30 0.001 0.718 0.016	Unable to determine if connected. High flow. Low water level. Drizzle.

Site	Date	Time	Wet or Dry Event	Results of Interest	U/S Results	P20 / P80	Field Notes / Comments
SW10-06	24/11/2021	10:43	Dry	Iron = 1.264 mg/L Manganese = 0.035 mg/L Nickel = 0.002 mg/L	1.239 0.015 0.001	1.112 0.022 0.001	Unable to determine if upstream and downstream connected. Medium flow. Medium water level. Overcast.
SW10-06	18/05/2022	12:44	Dry	Aluminium = 0.267 mg/L	0.195	0.180	Likely to be connected. High flow, high water level. Weather fine.
SW10-06	17/05/2022	13:08	Wet	DO = 2.67 mg/L	7.220	6.31	Upstream and downstream sites not connected. High flow, high water level. Drizzle.
SW10-08	12/11/2021	10:51	Wet	Lead = 0.002 mg/L Manganese = 0.055 mg/L	0.001 0.044	0.001 0.039	Upstream and downstream connected. Low flow. Medium water level. Drizzle
SW10-08	18/05/2022	13:31	Dry	Aluminium = 0.188 mg/L Zinc = 0.006 mg/L	0.169 0.004	0.162 0.004	Likely to be connected. High flow, high water level. Weather fine.
SW10-08	17/05/2022	12:50	Wet	Aluminium = 0.277 mg/L Iron = 1.343 mg/L Manganese = 0.046 mg/L	0.273 1.306 0.038	0.218 1.287 0.040	Unable to determine if connected. Medium flow, high water level. Drizzle.
SW11-02	18/05/2022	11:09	Dry	Oil & Grease = 6 mg/L Aluminium = 0.254 mg/L Iron = 1.623 mg/L Zinc = 0.007 mg/L	2 0.207 1.288 0.006	3 0.231 0.899 0.004	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Overcast.
SW11-02	16/05/2022	14:43	Wet	Oil & Grease = 6 mg/L Aluminium = 0.858 mg/L Iron = 1.660 mg/L	3 0.738 1.165	3 0.472 1.273	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.

Appendix C

Surface Water Quality: Data

(Note: Italicised values in the following tables are below the practical quantification limit and have been halved to enable the calculation of statistics)

SW3-02 - Picanny Creek / Pheasant Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-02	Not flowing	3/08/2016		7.02	0.22	6.50	14.3	57																					
SW3-02	Intermediate flow	8/09/2016		5.54	0.32	7.47	15.8	67	2	20	0.04	1.51	50	50	50														
SW3-02	Not flowing	6/10/2016		3.51	0.29	6.40	15.2	272																					
SW3-02		1/11/2016		3.57	0.35	7.28	20.7	4	1	9	0.03	0.79	50	50	50														
SW3-02		8/12/2016		3.56	0.30	6.91	23.3	10																					
SW3-02	Very low water level and not flowing. Not connected with SW3-01.	13/01/2017		2.54	0.28	6.93	26.0	13	1	11	0.03	1.62	50	170	50														
SW3-02	Very low water level and not flowing. Not connected with SW3-01.	1/02/2017		1.21	0.29	7.57	27.3	1																					
SW3-02	No visible flow, no connection between u/s and d/s sites.	23/03/2017		4.20	0.19	6.32	25.2	64	1	17	0.03	1.21	50	50	50														
SW3-02	No visible flow.	24/04/2017		0.34	0.16	6.77	18.3	15																					
SW3-02	Upstream and downstream sites not connected. No visible flow. Moderate water level. Weather fine.	11/05/2017		1.45	0.16	6.62	15.8	9	1	5	0.02	0.81	50	50	50														
SW3-02	Weather fine. Not connected. Water level moderate.	8/06/2017		2.23	0.14	6.98	12.8	41																					
SW3-02	Upstream and downstream sites not connected. No visible flow. Water level low to moderate. Weather fine.	24/07/2017		1.45	0.16	6.57	10.1	32	1	3	0.04	1.20	13	50	50														
SW3-02	Upstream and downstream sites not connected. Minimal flow. Low - moderate water level. Weather fine.	3/08/2017		2.32	0.16	6.63	10.2	22																					
SW3-02	Weather fine. U/S and D/S not connected. Water level low. No flow. Sample taken in isolated pool	4/09/2017		7.20	0.29	7.06	18.5	5	1	10	0.03	1.17	13	50	50														
SW3-02	Upstream and downstream sites not connected. Low water level. Overcast.	5/10/2017		3.16	0.20	6.99	17.9	13																					
SW3-02	Upstream and downstream not connected. Slight flow. Moderate water level.	2/11/2017		2.08	0.25	6.20	19.6	92	1	21	0.03	0.89	13	50	50														
SW3-02	Upstream and downstream not connected. Minimal flow, moderate water level. Weather fine.	6/12/2017		2.75	0.14	6.35	21.3	133																					
SW3-02	Upstream and downstream not connected. No visible flow. Low water level. Weather fine.	23/01/2018		2.43	0.18	6.85	27.3	37	1	8	0.04	1.57	13	50	50														
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	13/02/2018		1.14	0.19	6.98	25.1	20																					
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	20/03/2018		0.93	0.23	6.61	24.3	95	1	38	0.03	0.87	13	50	50														
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	11/04/2018		1.15	0.22	6.93	21.8	44																					
SW3-02	Upstream and downstream not connected. No visible flow. Low water level. Weather fine.	8/05/2018		3.33	0.39	6.47	18.7	18	1	10	0.02	0.64	13	50	50														

SW3-02 - Picanny Creek / Pheasant Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	25/06/2018	13:19	4.02	0.21	6.98	13.3	143																				
SW3-02	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	24/07/2018	17:54	3.56	0.29	7.21	9.7	70	1	32	0.02	0.81	13	50	50													
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	10/08/2018	10:11	3.96	0.30	7.13	10.6	53																				
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	17/09/2018	15:03	2.44	0.51	7.62	17.2	235	1	211	0.05	0.66	13	50	50													
SW3-02	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	26/10/2018	14:54	3.12	0.59	6.50	24.7	113																				
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2018	15:11	4.10	0.68	6.94	27.5	71	1	19	0.02	0.98	13	50	50													
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/12/2018	10:43	6.50	0.94	7.30	23.5	34																				
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	9/01/2019	14:07	2.41	0.49	7.17	27.1	49	1	33	0.03	1.44	13	50	50													
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	7/02/2019	9:29	8.14	0.60	7.30	25.4	23																				
SW3-02	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	22/03/2019	8:38	4.29	0.61	8.15	22.4	36	1	6	0.02	1.06	13	50	50													
SW3-02	Upstream and downstream sites not connected. No visible flow, very low water level. Turbidity exceeded maximum measuring range of probe. Weather fine.	24/04/2019	15:10	4.59	0.55	7.34	20.7	800																				
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather overcast.	2/05/2019	14:52	2.66	0.54	7.64	20.7	164	1	88	0.04	1.01	13	50	50													
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	14/06/2019	12:22	5.32	0.80	7.73	14.9	95																				
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/07/2019	9:56	5.09	0.83	7.11	16.2	150	1	24	0.03	1.68	13	50	50													
SW3-02	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	19/08/2019	8:31	11.04	1.15	8.15	15.1	9																				
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	19/09/2019	10:21	4.38	0.87	6.46	21.2	71	1	36	0.09	2.84	13	50	50													
SW3-02	No visible flow, low water level. Weather fine.	3/10/2019	11:04	7.37	1.14	7.06	22.9	8																				
SW3-02	No visible flow, low water level. Weather fine.	5/11/2019	8:49	2.61	1.24	6.81	23.3	5	1	6	0.02	0.88	50	50	50													
SW3-02	No visible flow, very low water level. Weather fine.	4/12/2019	13:24	10.47	1.46	8.45	28.1	21																				
SW3-02	No visible flow, very low water level. Weather fine.	8/01/2020	13:50	13.07	1.24	9.95	33.8	63	1	58	0.02	1.13	13	13	50													
SW3-02	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	18/02/2020	11:56	5.40	0.31	5.66	28.0	85																				

SW3-02 - Picanny Creek / Pheasant Creek

Dry Event Monitoring

[illegible]

SW3-02 - Picanny Creek / Pheasant Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Upstream Monitoring																													
SW3-01	Not flowing	3/08/2016		6.98	0.34	6.52	14.9	14																					
SW3-01	Not flowing/intermediate flow	8/09/2016		6.48	0.26	7.31	16.3	52	1	12	0.03	0.83	50	50	50														
SW3-01	Not flowing/stagnant water	6/10/2016		10.08	0.26	6.89	15.1	59																					
SW3-01		1/11/2016		3.45	0.30	7.50	19.9	63	1	28	0.07	1.57	50	160	50														
SW3-01		8/12/2016		3.56	0.39	7.07	21.7	104																					
SW3-01	Very low, not flowing and not connected to SW3-02. Stagnant.	13/01/2017		2.89	0.41	7.22	24.7	207	1	98	0.13	3.79	100	400	50														
SW3-01	Dry	1/02/2017																											
SW3-01	No visible flow, no connection between u/s and d/s sites.	23/03/2017		4.71	0.24	6.53	25.1	75	1	15	0.02	1.08	50	50	50														
SW3-01	Insufficient water to monitor.	24/04/2017																											
SW3-01	Upstream and downstream sites not connected. No visible flow. Low water level - isolated pools. Weather fine.	11/05/2017		2.28	0.30	7.13	15.1	10	1	5	0.02	0.62	50	50	50														
SW3-01	Dry	8/06/2017																											
SW3-01	Upstream and downstream sites not connected. No visible flow / stagnant. Water level low. Weather fine.	24/07/2017		2.53	0.27	6.86	10.5	35	1	17	0.02	0.74	13	50	50														
SW3-01	Upstream and downstream sites not connected. Isolated pool with no visible flow. Low water level. Weather fine.	3/08/2017		4.86	0.25	7.20	10.8	13																					
SW3-01	Weather fine. U/S and D/S not connected. Water level low. No flow. Sample taken in isolated pool.	4/09/2017		10.46	0.18	6.91	18.2	11	1	5	0.02	0.97	13	50	50														
SW3-01	Upstream and downstream sites not connected. Low water level. Overcast.	5/10/2017		2.78	0.34	7.29	17.5	33																					
SW3-01	Dry	2/11/2017																											
SW3-01	Upstream and downstream not connected. No visible flow, moderate water level. Weather fine.	6/12/2017		8.37	0.13	6.38	21.9	398																					
SW3-01	Dry	23/01/2018																											
SW3-01	Dry - not sampled. Overcast.	13/02/2018																											
SW3-01	Dry - not sampled. Overcast.	20/03/2018																											
SW3-01	Dry - not sampled. Weather fine.	11/04/2018																											
SW3-01	Dry - not sampled. Weather fine.	8/05/2018																											
SW3-01	Dry - not sampled. Weather fine.	25/06/2018	12:11																										
SW3-01	Dry - not sampled.	24/07/2018																											
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	10/08/2018	9:13	7.59	0.21	7.42	10.4	30																					

SW3-02 - Picanny Creek / Pheasant Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	17/09/2018	14:54	6.16	0.31	7.92	20.4	31	1	16	0.04	0.83	13	50	50													
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	26/10/2018	15:03	4.16	0.16	6.54	26.7	34																				
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2018	15:21	5.47	0.18	6.96	32.2	33	1	9	0.03	1.28	13	50	50													
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	4/12/2018	10:54	1.24	0.20	7.38	22.4	7																				
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	9/01/2019	14:20	2.57	0.19	7.51	27.8	45	1	22	0.04	1.62	13	50	50													
SW3-01	Sampled within isolated pool of water with no visible flow and very low water level. Drizzle.	7/02/2019	9:39	1.37	0.23	6.33	24.5	23																				
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	22/03/2019	8:13	1.47	0.26	7.52	22.5	40	1	17	0.06	1.72	13	50	50													
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/04/2019	15:17	2.10	0.19	7.47	21.6	40																				
SW3-01	Monitoring site relocated to new location approx. 400 m north-east. Upstream and downstream sites not connected. No visible flow, very low water level. Weather overcast.	2/05/2019	15:00	2.53	0.20	7.51	20.9	10	1	13	0.13	1.74	13	50	50													
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	14/06/2019	12:30	3.32	0.19	7.31	16.5	36																				
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/07/2019	10:21	3.30	0.21	6.75	15.5	54	1	11	0.03	1.30	13	50	50													
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	19/08/2019	8:41	1.76	0.17	7.52	14.1	14																				
SW3-01	Insufficient water to sample.	19/09/2019	10:21																									
SW3-01	Dry, not sampled.	3/10/2019	11:23																									
SW3-01	Dry, not sampled.	5/11/2019	8:37																									
SW3-01	Dry, not sampled.	4/12/2019	14:19																									
SW3-01	Dry, not sampled.	8/01/2020	13:43																									
SW3-01	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	18/02/2020	11:48	5.19	0.13	5.87	25.4	114																				
SW3-01	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	4/03/2020	11:02	3.36	0.18	5.64	25.1	85	1	53	0.04	1.18	13	50	50													
SW3-01	Upstream and downstream sites not connected. Very low flow, low water level. Overcast.	15/04/2020	11:55	3.84	0.15	7.03	21.0	144																				
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	14/05/2020	9:21	4.05	0.19	7.19	16.2	72	1	9	0.03	0.92	13	50	50													

SW3-02 - Picanny Creek / Pheasant Creek

Dry Event Monitoring

[illegible]

SW3-02 - Picanny Creek / Pheasant Creek

Wet Event Monitoring

[illegible]

SW3-02 - Picanny Creek / Pheasant Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-02	Upstream and downstream sites not connected. Very low flow, low water level. Weather fine.	14/12/2018	14:11	4.81	1.08	8.07	28.5	71																				
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	23/02/2019	12:03	2.34	0.55	7.74	23.5	12	1	8	0.02	1.03	13	50	50													
SW3-02	Upstream and downstream sites not connected. No visible flow, very low water level. Rain.	16/03/2019	13:03	4.57	0.67	8.29	23.0	39																				
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	20/04/2019	11:12	3.48	0.68	7.14	22.7	269	1	111	0.04	1.71	13	50	50													
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	16/05/2019	16:41	5.46	0.71	6.89	17.6	229																				
SW3-02	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	24/06/2019	10:14	6.30	0.82	7.27	11.5	88	1	12	0.02	0.95	13	50	50													
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/07/2019	13:42	4.79	0.73	6.98	15.0	148																				
SW3-02	Very low flow, low water level. Drizzle.	12/10/2019	8:14	7.66	1.10	7.92	17.2	19	1	13	0.10	0.77	13	50	50													
SW3-02	No visible flow, low water level. Overcast.	24/12/2019	11:57	5.06	1.03	7.60	25.8	448																				
SW3-02	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	16/01/2020	8:43	6.06	1.36	8.93	24.6	17	1	10	0.02	0.83	13	50	50													
SW3-02	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	7/02/2020	9:47	8.38	0.14	7.23	22.5	517																				
SW3-02	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	27/03/2020	14:41	7.62	0.50	7.23	24.5	370	1	148	0.07	1.10	13	50	50													
SW3-02	Upstream and downstream sites not connected. Very low flow, medium water level. Overcast.	4/04/2020	12:16	5.49	0.32	7.15	23.9	615																				
SW3-02	Upstream and downstream sites not connected. Low flow, medium water level. Weather fine.	11/06/2020	9:23	5.53	0.43	7.22	17.1	186	1	75	0.08	1.18	13	50	50													
SW3-02	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	8/08/2020	12:32	8.05	0.28	5.53	16.6	100																				
SW3-02	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	16/12/2020	11:00	13.22	0.07	6.56	22.8	934	1	164	0.03	1.08	15	5	50	21.400	0.001	0.0010	0.004	0.012	9.780	0.005	0.060	0.0002	0.003	0.001	0.0005	0.022
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	16/02/2021	13:48	4.79	0.29	6.88	25.6	23																				
SW3-02	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	3/05/2021	12:53	6.44	0.35	6.46	18.8	40	1	10	0.02	0.65	13	50	50	8.190	0.001	0.0010	0.002	0.007	4.530	0.005	0.081	0.0001	0.003	0.001	0.0005	0.011
SW3-02	Upstream and downstream sites not conncted. No visable flow. Medium water level. Overcast.	10/11/2021	10:52	7.42	0.27	8.19	25.0	102	1	32	0.05	0.91	13	50	50	11.000	0.001	0.0010	0.003	0.007	4.920	0.005	0.059	0.0001	0.003	0.001	0.0005	0.010
SW3-02	Upstream and downstream sites not connected. Very low flow, medium water level. Overcast.	4/07/2022	10:12	7.93	0.60	7.80	12.3	65	1	18	0.02	0.68	25	50	50	1.140	0.001	0.0010	0.001	0.002	1.650	0.005	0.130	0.0001	0.003	0.001	0.0005	0.001

SW3-02 - Picanny Creek / Pheasant Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.26	7.38		295	3	83	0.05	1.30	19	50	50	18.500	0.001	0.0010	0.003	0.009	9.962	0.005	0.111	0.0001	0.003	0.001	0.0005	0.034	
P20				3.30	0.15	6.65																							
St Dev					0.08	0.58																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW02		8/02/2013		6.89	0.18	6.96	24.2	55	3	20	0.04	0.40																	
Section3 SW02		30/05/2013		8.34	0.16	7.17	18.3	94	3	54	0.05	0.80																	
Section3 SW02		4/07/2013		8.65	0.19	6.86	15.6	97	3	3	0.04	0.86																	
Section3 SW02		15/11/2013		7.00	0.13	5.45	25.7	140	3	96	0.01	0.57																	
Upstream Monitoring																													
SW3-01	Very turbid water, fast flowing	4/08/2016		8.98	0.28	6.63	13.4	370																					
SW3-01		10/11/2016		1.29	0.27	7.21	22.0	54	1	18	0.03	2.55	50	150	50														
SW3-01		6/12/2016		10.84	0.40	6.67	23.2	151																					
SW3-01	No flow - not connected to SW3-02	7/01/2017		1.35	0.35	6.99	21.0	399	1	134	0.06	2.39	50	260	50														
SW3-01	Dry	28/02/2017																											
SW3-01	Dry	7/03/2017																											
SW3-01	Weather showers. Connection likely, unable to confirm if connected due to distance between sites. Water level high, slight flow.	14/06/2017		8.01	0.15	6.79	16.3	147																					
SW3-01	Dry	10/10/2017																											
SW3-01	Not connected. Low water level, slight flow.	6/11/2017		4.42	0.27	7.40	20.6	287																					
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		3.69	0.20	7.15	25.8	74	1	179	0.04	1.21	13	50	50														
SW3-01	Unable to determine whether upstream and downstream sites were connected. No visible flow, low to mid water level. Weather fine.	4/01/2018		4.48	0.17	6.56	26.0	141																					
SW3-01	Dry, not sampled.	5/02/2018																											
SW3-01	Unable to determine if upstream and downstream sites were connected. No visible flow, very low water level. Weather fine.	7/03/2018		6.60	0.20	6.88	23.4	531																					

SW3-02 - Picanny Creek / Pheasant Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-01	Dry	20/04/2018																										
SW3-01	Insufficient water to sample. Upstream and downstream sites not connected. No visible flow. Weather fine.	8/06/2018	12:33																									
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	15:07	4.72	0.22	7.00	18.2	127	1	64	0.10	1.17	13	50	50													
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	7/09/2018	13:05	5.75	0.32	7.50	18.6	70																				
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	6/10/2018	13:39	3.06	0.19	7.21	20.8	30	1	12	0.03	1.07	13	50	50													
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	14/12/2018	14:18	3.73	0.30	7.92	32.3	233																				
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	23/02/2019	12:12	7.08	0.22	7.36	23.1	15	1	27	0.04	1.71	13	50	50													
SW3-01	Upstream and downstream sites not connected. No visible flow, very low water level. Rain.	16/03/2019	13:13	0.83	0.26	7.42	22.9	37																				
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	20/04/2019	11:28	2.23	0.11	7.69	22.9	22	1	20	0.03	1.32	13	50	50													
SW3-01	Monitoring site relocated to new location approx. 400 m north-east. Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	16/05/2019	16:50	3.22	0.18	7.17	17.0	83																				
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Rain.	24/06/2019	10:34	4.29	0.19	6.79	12.3	55	1	12	0.02	1.14	13	50	50													
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/07/2019	13:53	3.51	0.19	6.96	16.3	50																				
SW3-01	Dry, not sampled.	12/10/2019	9:16																									
SW3-01	Dry, not sampled.	24/12/2019	11:47																									
SW3-01	Dry, not sampled.	16/01/2020	8:45																									
SW3-01	Upstream and downstream sites connected. Very high flow, high water level. Overcast.	7/02/2020	9:12	9.52	0.11	7.48	22.4	479																				
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	27/03/2020	14:51	2.72	0.23	6.80	22.7	28	1	14	0.02	1.28	13	50	50													
SW3-01	Upstream and downstream sites not connected. Very low flow, low water level. Overcast.	4/04/2020	12:28	4.09	0.15	6.38	21.8	405																				
SW3-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	11/06/2020	13:53	5.69	0.18	7.24	19.0	41	1	15	0.04	0.87	13	50	50													
SW3-01	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	8/08/2020	12:22	3.42	0.07	5.27	13.9	300																				

SW3-02 - Picanny Creek / Pheasant Creek

Wet Event Monitoring

[illegible]

SW3-04 - Unnamed tributary of Glenugie Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-04	Intermittent watercourse - not flowing	3/08/2016		7.81	0.31	6.59	14.5	14																					
SW3-04	Not flowing	8/09/2016		2.00	0.28	6.73	14.3	140	2	30	0.05	1.02	50	50	50														
SW3-04	Stagnant water, not flowing. Isolated water hole.	6/10/2016		1.86	0.32	6.98	13.6	79																					
SW3-04		1/11/2016		0.92	0.40	7.17	18.8	278	1	16	0.10	2.21	50	130	50														
SW3-04	Accurate turbidity reading could not be obtained	8/12/2016		1.43	0.31	7.23	22.2																						
SW3-04	Very low water level, no flow. Sample taken from isolated pool. Not connected with SW3-03	13/01/2017		1.74	0.28	6.97	24.5		1	10	0.16	2.47	140	640	110														
SW3-04	Very low water level, no flow and stagnant. Sample taken from isolated pool. Not connected with SW3-03	1/02/2017		0.66	0.45	7.65	26.8	7																					
SW3-04	Slight visible flow, no connection between u/s and d/s sites.	23/03/2017		4.48	0.27	6.50	25.5	102	1	23	0.03	0.84	50	50	50														
SW3-04	No visible flow.	24/04/2017		2.64	0.48	6.80	18.2	1																					
SW3-04	Upstream and downstream sites not connected. No visible flow, low water level. Isolated pools. Weather fine.	11/05/2017		2.31	0.13	6.53	15.8	6	1	2	0.04	0.77	50	50	50														
SW3-04	Weather fine. Not connected. Water level very low. Stagnant	8/06/2017		3.35	0.66	6.58	13.8	29																					
SW3-04	Upstream and downstream site not connected. No visible flow. Low to moderate water level. Weather fine	24/07/2017		3.38	0.71	6.53	10.5	7	1	5	0.02	0.37	13	50	50														
SW3-04	Upstream and downstream sites not connected. Isolated pool with no visible flow. Low water level. Weather fine.	3/08/2017		5.06	0.72	6.80	10.7	2																					
SW3-04	Weather fine. U/S and D/S not connected. Water level low. No flow. Sample taken in isolated pool	4/09/2017		6.39	0.90	6.84	16.3	4	3	5	0.02	0.53	13	50	50														
SW3-04	Upstream and downstream sites not connected. Low water level. Overcast.	5/10/2017		2.50	10.10	7.50	17.8	2																					
SW3-04	Upstream and downstream sites not connected. Low water level.	2/11/2017		1.71	0.57	6.47	18.9	123	1	24	0.04	1.41	13	50	50														
SW3-04	Upstream and downstream not connected. Light flow, moderate water level. Weather fine.	6/12/2017		5.06	0.62	6.75	21.2	412																					
SW3-04	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		3.14	0.46	7.16	25.6	80	1	23	0.04	1.39	13	50	50														
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	13/02/2018		1.39	0.45	6.94	25.6	67																					
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2018		3.43	0.75	6.77	24.5	41	1	24	0.03	0.64	13	50	50														
SW3-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	11/04/2018		1.34	0.57	6.69	21.8	190																					
SW3-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	8/05/2018		2.51	0.60	6.58	18.2	75	1	38	0.03	0.61	13	50	50														

SW3-04 - Unnamed tributary of Glenugie Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-04	Upstream and downstream sites not connected. Very low flow, very low water level. Weather fine.	25/06/2018	13:03	6.78	0.87	6.72	11.6	70																				
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/07/2018	17:02	4.08	0.96	7.33	11.8	9	1	9	0.02	0.21	13	50	50													
SW3-04	Upstream and downstream sites not connected. Isolated pool of water with no visible flow and very low water level. Weather fine.	10/08/2018	8:35	7.91	1.03	6.91	10.6	10																				
SW3-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	17/09/2018	14:31	3.01	0.81	7.50	17.1	53	1	17	0.02	1.42	13	50	50													
SW3-04	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	26/10/2018	14:41	4.63	0.59	6.37	22.7	54																				
SW3-04	No visible flow, low water level. Weather fine.	5/11/2018	14:53	3.92	1.51	7.31	24.2	38	1	15	0.03	2.07	13	50	50													
SW3-04	No visible flow, very low water level. Weather fine.	4/12/2018	11:30	0.12	1.00	7.44	20.7	18																				
SW3-04	No visible flow, low water level. Overcast.	9/01/2019	13:50	1.99	0.52	7.11	24.6	17	1	14	0.08	1.40	13	50	50													
SW3-04	No visible flow, very low water level. Drizzle.	7/02/2019	10:10	1.24	0.59	7.13	23.6	24																				
SW3-04	Insufficient water to sample.	20/03/2019	12:14																									
SW3-04	Low flow, medium water level. Weather fine.	24/04/2019	14:55	4.30	0.67	7.61	21.5	216																				
SW3-04	No visible flow, low water level, weather overcast.	2/05/2019	14:33	4.16	0.70	7.29	20.3	28	1	15	0.02	0.60	13	50	50													
SW3-04	No visible flow, very low water level. Weather fine.	14/06/2019	12:09	2.45	1.16	7.32	16.5	27																				
SW3-04	No visible flow, low water level. Overcast.	4/07/2019	10:41	3.73	0.97	6.81	15.7	59	1	6	0.02	1.30	13	50	50													
SW3-04	No visible flow, very low water level. Weather fine.	19/08/2019	9:01	0.59	1.15	7.06	13.3	7																				
SW3-04	Dry, not sampled.	19/09/2019	10:37																									
SW3-04	Dry, not sampled.	3/10/2019	11:26																									
SW3-04	Dry, not sampled.	5/11/2019	8:54																									
SW3-04	Dry, not sampled.	4/12/2019	14:13																									
SW3-04	Dry, not sampled.	8/01/2020	13:39																									
SW3-04	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	18/02/2020	16:02	8.73	0.28	6.28	28.1	53																				
SW3-04	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	4/03/2020	13:58	3.01	0.34	6.11	25.5	37	1	12	0.05	1.28	13	50	50													
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	15/04/2020	12:09	2.96	0.31	6.87	19.5	113																				
SW3-04	Insufficient water to sample.	14/05/2020	9:51																									
SW3-04	Very low flow, low water level. Overcast.	15/06/2020	13:49	6.26	0.57	6.90	17.2	100																				
SW3-04	Dry, not sampled.	5/11/2020																										
SW3-04	Insufficient water to sample	25/05/2021																										

SW3-04 - Unnamed tributary of Glenugie Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW3-04	Upstream and downstream not connected. No visible flow. Low water level. Overcast.	17/11/2021	10:22	3.66	0.32	8.61	20.2	93	1	11	0.05	0.91	13	50	50	18.300	0.006	0.0010	0.005	0.011	11.400	0.005	0.150	0.0001	0.003	0.001	0.0015	0.022	
SW3-04	Likely to be connected. Very low flow, low water level. Drizzle.	5/05/2022	10:52	4.61	0.24	7.52	18.6	70	1	32	0.04	0.62	13	50	50	0.440	0.001	0.0010	0.001	0.003	0.460	0.005	0.120	0.0001	0.003	0.001	0.0005	0.009	
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					1.44	7.39		136	3	47	0.06	1.03	50	50	50	0.340	0.001	0.0010	0.001	0.002	0.120	0.005	0.006	0.0001	0.003	0.001	0.0005	0.011	
P20				3.25	0.27	6.76																							
St Dev					1.56	0.37																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW03		27/02/2013		7.84	0.20	6.96	23.1	145	3	63	0.08	1.00																	
Section3 SW03		22/03/2013		3.30	1.02	7.01	22.0	28	3	15	0.03	0.90																	
Section3 SW03		23/04/2013		6.66	0.75	6.76	20.6	87	3	42	0.06	1.40																	
Section3 SW03		23/05/2013		5.04	2.33	7.12	12.3	12	3	9	0.02	0.70																	
Section3 SW03		28/06/2013		7.78	1.77	7.32	15.4	75	3	54	0.01	0.60																	
Section3 SW03		25/07/2013		6.00	1.44	6.81	14.0	56	3	54	0.03	0.62																	
Section3 SW03		22/08/2013		6.76	5.06	7.53	13.3	6	3	12	0.01	0.32																	
Section3 SW03		26/09/2013		3.87	4.95	7.50	19.2	5	3	14	0.01	0.72																	
Section3 SW03		24/10/2013		3.62	5.37	7.57	22.6	6	3	13	0.01	0.82																	
Section3 SW03		26/11/2013		7.75	0.74	7.00	24.9	105	3	43	0.01	0.80																	
Section3 SW03		19/12/2013		2.36	1.29	6.62	23.5	21	3	7	0.25	0.10																	
Upstream Monitoring																													
SW3-03	Intermittent watercourse, not flowing	3/08/216		6.51	0.36	6.77	13.5	41																					
SW3-03	Sample was not taken at 'actual location'. Sample taken in medium/large lagoon adjacent to Old Six Mile Ln. Not flowing.	8/09/2016		3.77	0.34	7.23	14.8	171	1	39	0.05	1.30	50	50	50														
SW3-03	Stagnant water, not flowing. Isolated water hole	6/10/2016		3.25	0.39	6.99	13.9	142																					
SW3-03		1/11/2016		1.21	0.70	7.24	19.4	67	1	19	0.06	1.17	50	50	50														
SW3-03	Dry	8/12/2016																											
SW3-03	Dry	13/01/2017																											
SW3-03	Dry	1/02/2017																											

SW3-04 - Unnamed tributary of Glenugie Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Disolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-03	Slight visible flow, no connection between u/s and d/s sites.	23/03/2017		3.77	0.27	6.36	25.4	28	1	6	0.02	0.71	50	50	50													
SW3-03	Insufficient water to monitor	24/04/2017																										
SW3-03	Upstream and downstream sites not connected. No visible flow, low water level. Isolated pools. Weather fine.	11/05/2017		6.18	0.46	7.67	17.6	5	1	3	0.02	0.34	50	110	50													
SW3-03	Dry	8/06/2017																										
SW3-03	Upstream and downstream site not connected. No visible flow. Low to moderate water level. Weather fine	24/07/2017		3.42	0.41	7.13	10.6	28	1	58	0.02	0.45	13	50	50													
SW3-03	Upstream and downstream sites not connected. Isolated pool with no visible flow. Low water level. Weather fine.	3/08/2017		5.52	0.40	7.39	11.0	14																				
SW3-03	Dry	4/09/2017																										
SW3-03	Dry	5/10/2017																										
SW3-03	Low Water level. No flow.	2/11/2017		2.76	0.28	6.73	20.5	136	1	22	0.04	0.95	13	50	50													
SW3-03	Upstream and downstream not connected. No visibe flow, low water level. Weather fine.	6/12/2017		4.32	0.24	6.84	20.2	324																				
SW3-03	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		1.15	0.35	7.00	31.2	25	1	45	0.03	1.26	13	50	50													
SW3-03	Dry - not sampled. Overcast.	13/02/2018																										
SW3-03	Dry - not sampled.	20/03/2018																										
SW3-03	Dry - not sampled. Weather fine.	11/04/2018																										
SW3-03	Dry - not sampled. Weather fine.	8/05/2018																										
SW3-03	Waterway dry. Weather fine.	25/06/2018	11:52																									
SW3-03	Dry, not sampled. Weather fine.	24/07/2018	17:02																									
SW3-03	Dry, not sampled. Weather fine.	10/08/2018	8:38																									
SW3-03	Dry - not monitored.	17/09/2018	14:27																									
SW3-03	Insufficient water to sample.	26/10/2018	14:42																									
SW3-03	Dry, not sampled.	5/11/2018	13:54																									
SW3-03	Dry, not sampled.	4/12/2018	11:20																									
SW3-03	Dry, not sampled.	9/01/2019	13:51																									
SW3-03	Dry, not sampled.	7/02/2019	9:59																									
SW3-03	Dry, not sampled.	20/03/2019	12:22																									
SW3-03	Dry, not sampled.	24/04/2019	13:47																									
SW3-03	Dry, not sampled.	2/05/2019																										
SW3-03	Dry, not sampled.	14/06/2019	12:12																									

SW3-04 - Unnamed tributary of Glenugie Creek

Dry Event Monitoring

[illegible]

SW3-04 - Unnamed tributary of Glenugie Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Downstream Monitoring																												
SW3-04	Very turbid water, fast flowing. Water over road.	4/08/2016		8.08	0.09	6.50	13.3	359																				
SW3-04		10/11/2016		0.26	0.39	7.56	23.0	125	1	26	0.08	3.44	50	180	50													
SW3-04	Accurate turbidity reading could not be obtained	6/12/2016		9.52	0.20	7.42	22.8																					
SW3-04	Very low water level, stagnant and no flow. Not connected with SW3-03	7/01/2017		1.27	0.24	6.79	22.0	294	1	103	0.21	2.78	50	320	50													
SW3-04	Dry	28/02/2017																										
SW3-04	Dry	7/03/2017																										
SW3-04	Weather showers. Connected. Water level low, slight flow.	14/06/2017		8.49	0.13	6.72	17.8	112																				
SW3-04	Dry	10/10/2017																										
SW3-04	Not connected. Slight flow, low water level.	6/11/2017		3.43	0.57	7.03	19.9	87																				
SW3-04	Upstream and downstream sites connected. Slight flow, medium water level. Weather, fine. Turbidity exceeded maximum range of probe.	2/12/2017		3.34	0.44	6.70	27.2	800	1	574	0.06	1.12	13	50	50													
SW3-04	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	4/01/2018		4.89	0.19	6.46	25.3	219																				
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/02/2018		2.48	0.47	6.81	23.6	16	1	24	0.03	1.03	13	50	50													
SW3-04	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Weather fine.	7/03/2018		4.37	0.47	6.49	24.0	687																				
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/04/2018		1.24	0.58	6.89	22.1	10	1	6	0.02	0.90	13	50	50													
SW3-04	Upstream and downstream sites not connected. Low flow, medium water level. Weather fine.	8/06/2018	13:13	5.71	0.49	6.21	15.6	536																				
SW3-04	No visible flow, very low water level. Turbidity reading exceeded maximum measuring range of probe. Weather fine.	27/08/2018	14:42	5.08	0.48	6.79	15.3	800	1	752	0.15	1.52	13	50	50													
SW3-04	Very low flow, medium water level. Overcast.	7/09/2018	12:45	4.12	0.45	6.70	17.4	316																				
SW3-04	No visible flow, very low water level. Weather fine.	6/10/2018	13:15	5.03	0.92	7.05	19.5	100	1	28	0.02	2.42	13	50	50													
SW3-04	No visible flow, very low water level. Weather fine.	14/12/2018	13:56	0.83	0.93	7.82	24.3	30																				
SW3-04	Sampled in an isolated pool of water with no visible flow and very low water level. Weather fine.	23/02/2019	11:33	0.38	0.62	7.46	20.2	12	1	9	0.03	1.43	13	50	50													
SW3-04	No visible flow, very low water level. Rain.	16/03/2019	12:42	1.32	7.15	7.88	22.0	32																				
SW3-04	Very low flow, medium water level. Overcast.	20/04/2019	11:59	4.22	0.82	7.41	20.3	214	1	97	0.07	1.61	13	50	50													
SW3-04	No visible flow, low water level. Drizzle.	16/05/2019	16:21	2.42	0.79	6.96	16.4	12																				
SW3-04	Upstream and downstream sites not connected. No visible flow, low water level. Rain.	24/06/2019	10:52	3.31	1.15	6.91	11.7	23	1	1	0.02	0.39	13	50	50													

SW3-04 - Unnamed tributary of Glenugie Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-04	No visible flow, low water level. Overcast.	5/07/2019	13:13	3.23	0.98	6.83	15.6	50																				
SW3-04	Dry, not sampled.	12/10/2019	9:26																									
SW3-04	Dry, not sampled.	24/12/2019	11:46																									
SW3-04	Dry, not sampled.	16/01/2020	9:00																									
SW3-04	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	7/02/2020	9:30	8.22	0.16	7.45	22.8	899																				
SW3-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	27/03/2020	14:25	7.53	0.61	7.67	24.7	67	1	24	0.10	1.70	13	50	50													
SW3-04	Upstream and downstream sites connected. Low flow, very low water level. Overcast.	4/04/2020	11:57	7.04	0.28	7.18	22.9	253																				
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. In-situ data error. EC, pH and turbidity sampled as lab parameters. Weather fine.	11/06/2020	14:44		0.40	6.86		160	1	63	0.10	1.44	13	50	50													
SW3-04	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine.	8/08/2020	12:03	7.58	0.32	5.13	13.7	126																				
SW3-04	Upstream and downstream sites connected. Very high flow, very high water level. Turbidity exceeded maximum measuring range. Rain.	16/12/2020	10:46	14.28	0.05	6.39	22.8	1000	1	1558	0.06	1.23	15	5	50	12.300	0.002	0.0010	0.003	0.012	9.100	0.005	0.078	0.0001	0.003	0.001	0.0005	0.018
SW3-04	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	16/02/2021	14:14	3.48	0.37	6.98	24.1	21																				
SW3-04	Upstream and downstream sites not connected. Very low flow, low water level. Overcast.	3/05/2021	12:38	5.36	0.40	6.37	19.6	119	1	59	0.02	0.70	13	50	50	7.530	0.001	0.0010	0.002	0.005	4.900	0.005	0.096	0.0001	0.003	0.001	0.0005	0.064
SW3-04	Upstream and downstream connected. Low flow. Low water level. Weather fine.	10/11/2021	10:13	5.60	0.26	7.83	23.0	152	1	30	0.06	1.01	13	50	50	20.500	0.002	0.0010	0.005	0.013	11.000	0.005	0.080	0.0001	0.003	0.001	0.0005	0.019
SW3-04	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	4/07/2022	15:29	5.60	0.45	7.50	12.9	52	1	11	0.07	0.74	25	50	50	1.360	0.001	0.0010	0.001	0.002	3.250	0.005	0.130	0.0001	0.003	0.001	0.0005	0.001
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.35	7.55		343	3	130	0.06	1.26	23	50	50	26.780	0.001	0.0010	0.006	0.018	14.720	0.005	0.095	0.0001	0.003	0.001	0.0005	0.022
P20				4.54	0.15	6.64																						
St Dev					0.23	0.55																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW03		8/02/2013		5.37	0.47	7.15	23.7	103	3	130	0.04	0.40																
Section3 SW03		30/05/2013		8.06	0.54	7.22	17.9	144	3	130	0.01	0.60																

SW3-04 - Unnamed tributary of Glenugie Creek

Wet Event Monitoring

[illegible]

SW3-04 - Unnamed tributary of Glenugie Creek

Wet Event Monitoring

[illegible]

SW3-06 - Unnamed tributary of Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-06		3/08/2016		6.08	0.31	6.20	15.6	17																					
SW3-06	Not flowing	8/09/2016		1.85	0.28	6.39	17.9	5	2	23	0.08	1.55	50	50	50														
SW3-06	Stagnant, not flowing	6/10/2016		1.82	0.33	6.06	17.8	293																					
SW3-06		1/11/2016		2.90	0.33	6.89	24.6	28	1	13	0.08	1.76	50	190	50														
SW3-06		8/12/2016		3.64	0.50	6.06	23.4	75																					
SW3-06	Very low water level, no flow. Sample taken from isolated pool. Not connected with SW3-05. Strong odour.	13/01/2017		0.00	0.43	6.09	27.5		3	13100	1.77	9.33	270	1780	310														
SW3-06	Dry	1/02/2017																											
SW3-06	U/s and d/s sites connected	23/03/2017		0.08	0.18	6.02	27.4	69	1	127	0.10	2.73	50	50	50														
SW3-06	No visible flow.	24/04/2017		1.51	0.42	7.06	19.2	137																					
SW3-06	Upstream and downstream sites connected. No visible flow, low water level. Odour (sulfur?) apparent. Weather fine.	11/05/2017		4.31	0.28	6.80	21.1	12	1	14	0.07	1.25	50	50	50														
SW3-06	Weather fine. Connected by slight trickle. Water level low. Stagnant water.	8/06/2017		3.59	0.28	6.61	14.2	465																					
SW3-06	Upstream and downstream sites not connected. No visible flow. Water level low. Weather fine.	24/07/2017		6.43	0.35	7.15	9.7	0	1	39	0.04	1.03	13	50	50														
SW3-06	Upstream and downstream sites not connected. Minimal flow. Low water level. Weather fine.	3/08/2017		7.17	0.33	7.28	12.1	27																					
SW3-06	Weather fine. U/S and D/S not connected. No observed flow. Low water level.	4/09/2017		8.43	0.36	7.24	24.5	37	1	31	0.05	1.36	13	50	50														
SW3-06	Upstream and downstream sites not connected. Very low water level. Abundant macrophytes present. Weather fine.	5/10/2017		10.18	0.46	8.33	20.9	56																					
SW3-06	Upstream and downstream sites not connected. Very low water level.	2/11/2017		7.61	0.48	7.00	24.2	29	1	9	0.02	1.05	13	50	50														
SW3-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	6/12/2017		2.01	0.60	6.71	25.3	586																					
SW3-06	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		6.62	0.35	7.63	34.9	166	1	256	0.03	1.19	13	50	50														
SW3-06	Unable to access site due to crane lifting girders. Water levels observed from a distance to be very low. Upstream and downstream sites not connected. No visible flow. Overcast.	13/02/2018																											
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2018		6.45	0.49	7.06	31.7	109	1	80	0.03	0.84	13	50	50														

SW3-06 - Unnamed tributary of Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	11/04/2018		5.72	0.36	7.16	25.6	292																				
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	8/05/2018		9.55	0.47	8.53	22.2	156	1	87	0.06	0.77	13	50	50													
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine. Technical error, no Type A parameters recorded.	25/06/2018	12:50																									
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. High amount of suspended algae. Water is a murky green colour. Weather fine.	24/07/2018	16:49	11.27	0.48	7.50	14.4	33	1	19	0.03	0.68	13	50	50													
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	10/08/2018	10:52	8.07	0.50	8.06	14.4	11																				
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	17/09/2018	14:19	7.88	0.37	8.27	22.8	61	1	60	0.14	3.25	13	50	50													
SW3-06	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	26/10/2018	14:32	2.48	0.93	6.29	24.6	31																				
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	5/11/2018	14:39	5.24	0.89	7.02	23.8	35	4	11	0.02	0.73	13	50	50													
SW3-06	Insufficient water to sample.	4/12/2018	11:41																									
SW3-06	Insufficient water to sample.	9/01/2019	13:38																									
SW3-06	Insufficient water to monitor.	7/02/2019	10:37																									
SW3-06	Dry, not sampled.	20/03/2019	11:55																									
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	24/04/2019	14:29	1.49	0.72	7.27	21.3	125																				
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Weather overcast.	2/05/2019	14:12	3.45	0.77	7.52	21.0	11	1	6	0.02	0.33	13	50	50													
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	14/06/2019	11:46	6.86	1.08	7.98	18.2	6																				
SW3-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/07/2019	11:09	3.72	0.83	6.98	16.0	130	1	7	0.02	0.69	13	50	50													
SW3-06	No visible flow, very low water level. Weather fine.	19/08/2019	9:16	9.14	1.06	7.74	15.8	4																				
SW3-06	Dry, not sampled.	19/09/2019	10:59																									
SW3-06	No visible flow, low water level. Weather fine.	3/10/2019	11:36	7.43	1.12	7.61	20.7	3																				
SW3-06	No visible flow, very low water level. Rain.	5/11/2019	9:16	5.30	1.25	7.61	21.9	3	1	2	0.02	0.48	50	50	50													
SW3-06	Dry, not sampled.	4/12/2019	13:58																									
SW3-06	Insufficient water to sample.	8/01/2020	13:33																									

SW3-06 - Unnamed tributary of Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-06	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	18/02/2020	12:20	5.49	0.11	5.88	30.1	36																				
SW3-06	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	4/03/2020	11:39	2.27	0.33	6.44	26.2	24	1	18	0.06	1.52	13	50	50													
SW3-06	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	15/04/2020	11:21	3.34	0.20	6.57	18.7	51																				
SW3-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	14/05/2020	10:07	3.88	0.31	6.95	18.8	12	1	4	0.02	0.88	13	50	50													
SW3-06	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	15/06/2020	9:39	3.46	0.54	7.20	15.8	75																				
SW3-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2020	11:13	7.65	0.53	7.70	23.6	11	1	3	0.02	0.76	13	50	50	0.250	0.001	0.0010	0.002	0.002	0.640	0.005	0.092	0.0001	0.003	0.001	0.0005	0.044
SW3-06	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	25/05/2021	12:05	10.79	0.20	6.60	17.1	33	1	19	0.04	1.05	13	50	50	2.590	0.001	0.0010	0.002	0.004	4.720	0.005	0.094	0.0001	0.003	0.001	0.0005	0.037
SW3-06	Upstream and downstream connected. No visible flow. Medium level. Overcast.	17/11/2021	11:02	3.84	0.16	8.17	21.1	25	1	18	0.05	1.63	13	50	50	11.800	0.002	0.0010	0.003	0.005	7.580	0.005	0.170	0.0001	0.003	0.002	0.0015	0.012
SW3-06	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/05/2022	11:28	4.38	0.11	7.43	18.3	35	1	14	0.04	1.10	13	50	50	0.160	0.001	0.0010	0.001	0.002	0.410	0.005	0.030	0.0001	0.003	0.001	0.0005	0.011
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.90	7.34		88	3	25	0.05	1.52	28	50	50	4.822	0.002	0.0010	0.001	0.003	7.518	0.005	0.440	0.0001	0.003	0.001	0.0011	0.013
P20				3.05	0.29	6.23																						
St Dev					0.49	0.78																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW04		6/03/2013		2.17	0.29	6.15	23.7	35	3	30	0.05	1.50																
Section3 SW04		22/03/2013		5.00	0.78	6.72	25.3	16	3	20	0.05	2.20																
Section3 SW04		23/04/2013		3.89	0.40	6.49	17.7	19	3	15	0.04	1.60																
Section3 SW04		23/05/2013		9.01	1.22	6.78	13.1	15	3	9	0.02	0.80																
Section3 SW04		28/06/2013		6.86	1.05	6.29	14.3	21	3	10	0.02	0.61																
Section3 SW04		25/07/2013		6.64	1.02	6.01	12.8	18	3	16	0.04	0.82																
Section3 SW04		22/08/2013		11.99	1.81	5.85	15.8	9	3	7	0.05	0.30																
Section3 SW04		26/09/2013		6.43	1.78	5.72	20.4	8	3	12	0.03	0.71																
Section3 SW04		24/10/2013		6.44	2.34	5.75	26.0	7	3	9	0.02	1.10																

SW3-06 - Unnamed tributary of Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time																									
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Section3 SW04		26/11/2013		5.70	0.41	6.41	26.0	17	3	8	0.03	1.40																
Section3 SW04		19/12/2013		7.07	0.01	5.93	23.9	16	3	9	0.03	0.80																
Upstream Monitoring																												
SW3-05	Intermittent watercourse	3/08/2016		4.47	0.59	6.00	15.2	31																				
SW3-05	Not flowing	8/09/2016		3.94	0.30	6.41	19.4	9	1	25	0.09	1.66	50	50	50													
SW3-05	Stagnant water	6/10/2016		1.06	0.33	6.47	18.1	113																				
SW3-05		1/11/2016		3.03	0.35	6.94	24.5	7	1	8	0.06	1.73	50	50	50													
SW3-05	Dry	8/12/2016																										
SW3-05	Dry	13/01/2017																										
SW3-05	Dry	1/02/2017																										
SW3-05	U/s and d/s sites connected	23/03/2017		0.09	0.20	5.91	26.2	26	1	25	0.08	2.49	50	50	50													
SW3-05	No visible flow.	24/04/2017		0.00	0.43	6.48	17.3	13																				
SW3-05	Upstream and downstream sites connected. No visible flow, low water level. Channel has abundant aquatic macrophytes. Weather fine.	11/05/2017		7.59	0.24	8.04	19.3	3	1	1	0.02	0.60	50	50	50													
SW3-05	Weather fine. Connected by slight trickle. Water level low.	8/06/2017		6.22	0.29	6.69	17.7	163																				
SW3-05	Insufficient water to sample	24/07/2017																										
SW3-05	Insufficient water to sample	3/08/2017																										
SW3-05	Dry	4/09/2017																										
SW3-05	Dry	5/10/2017																										
SW3-05	Dry	2/11/2017																										
SW3-05	Upstream and downstream sites not connected. No visible flow, low water level. Turbidity exceeded maximum range of probe. Weather fine.	6/12/2017		7.89	0.67	6.25	22.0	800																				
SW3-05	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		4.73	0.40	6.78	35.3	742	1	40	0.03	1.17	13	50	50													
SW3-05	Unable to access site due to crane lifting girders. Water levels observed from a distance to be very low. Upstream and downstream sites not connected. No visible flow. Overcast.	13/02/2018																										
SW3-05	Dry - not sampled.	20/03/2018																										

SW3-06 - Unnamed tributary of Coldstream River

Dry Event Monitoring

[illegible]

SW3-06 - Unnamed tributary of Coldstream River

Dry Event Monitoring

[illegible]

SW3-06 - Unnamed tributary of Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-06	Access road blocked by flood water	4/08/2016																											
SW3-06	Not flowing	25/08/2016		5.86	0.15	5.54	19.9	55	2	20	0.09	1.52	50	50	50														
SW3-06		10/11/2016		6.71	0.34	7.00	28.9	33	1	18	0.07	1.57	50	50	50														
SW3-06		6/12/2016		8.28	0.48	7.42	25.5	149																					
SW3-06	Very low water level, no flow and very turbid water. Turbidity reading exceeded maximum range of probe. No connection with SW3-05	7/01/2017		2.48	0.39	5.76	26.4	800	1	212	0.17	3.93	50	170	50														
SW3-06	Dry	28/02/2017																											
SW3-06	Dry	7/03/2017																											
SW3-06	Low flow. Turbidity reading exceeded maximum range of probe. No connection between upstream and downstream monitoring sites.	14/03/2017		3.13	0.52	6.08	22.0	800	2	1625	0.51	3.40	50	50	50														
SW3-06	Weather showers. Connected. Water level high, slight flow.	14/06/2017		5.60	0.09	6.23	17.9	143																					
SW3-06	Upstream and downstream sites not connected. Water level very low, stagnant water. Weather fine.	10/10/2017		9.19	0.44	7.83	26.3	48	1	18	0.07	1.25	13	50	50														
SW3-06	Upstream and downstream sites connected. Slight flow. Low water level. Turbidity reading exceeded maximum range of probe. Rain.	16/10/2017		6.40	0.40	8.34	20.2	800																					
SW3-06	Not connected. Moderate water level, no flow.	6/11/2017		3.72	0.48	7.13	23.2	88																					
SW3-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine. Turbidity exceeded maximum range of probe.	2/12/2017		4.15	0.59	6.54	28.2	800	1	398	0.05	1.65	13	50	50														
SW3-06	Upstream and downstream sites connected. Moderate to high flow, high water level. Overcast.	22/12/2017		5.52	0.42	6.07	24.4	310																					
SW3-06	Upstream and downstream sites connected. Low flow, moderate to high water level. Weather fine.	4/01/2018		2.52	0.13	6.23	26.8	79																					
SW3-06	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		4.58	0.42	6.84	26.9	19	1	20	0.02	1.01	13	50	50														
SW3-06	Upstream and downstream sites connected. Low flow, low water level. Turbidty reading exceeded maximum range of probe. Overcast.	21/02/2018		3.37	0.70	6.60	23.4	800	1	255	0.03	1.23	13	50	50														
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Turbidity reading exceeded maximum range of probe. Weather fine.	7/03/2018		4.45	0.40	6.18	23.1	800																					
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Rain.	22/03/2018		3.50	0.51	6.81	23.2	652	1	770	0.04	1.02	13	50	50														
SW3-06	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/04/2018		6.39	0.33	7.27	26.6	14	1	135	0.04	1.24	13	50	50														

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-06	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	27/04/2018		3.25	0.44	7.20	21.0	281																				
SW3-06	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	8/06/2018	13:04	4.91	0.35	6.37	15.6	362																				
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	28/06/2018	9:52	2.79	0.53	6.66	13.6	60	1	30	0.24	1.89	13	50	50													
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	14:30	4.85	0.62	6.98	15.7	190	1	116	0.05	1.29	13	50	50													
SW3-06	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	7/09/2018	12:32	7.53	0.44	6.89	18.6	155																				
SW3-06	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	6/10/2018	13:01	3.74	0.93	6.86	20.2	219	1	106	0.07	3.09	13	50	50													
SW3-06	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	12/10/2018	11:15	3.63	0.52	7.32	18.1	214																				
SW3-06	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	14/12/2018	13:42	3.70	1.14	7.81	26.2	64																				
SW3-06	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	17/12/2018	15:19	4.60	0.10	6.61	24.9	89	1	48	0.04	1.27	13	50	50													
SW3-06	Dry, not sampled.	23/02/2019	11:09																									
SW3-06	Dry, not sampled.	16/03/2019	12:19																									
SW3-06	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	20/04/2019	12:24	7.29	0.60	7.42	21.1	505	1	224	0.08	1.22	13	50	50													
SW3-06	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	16/05/2019	16:06	6.94	0.91	7.04	18.0	13																				
SW3-06	Upstream and downstream sites connected. Very low flow, medium water level. Rain.	24/06/2019	11:09	5.79	1.11	7.19	13.0	92	1	9	0.02	0.38	13	50	50													
SW3-06	Upstream and downstream sites connected. Medium flow, medium water level. Turbidity reading exceeded maximum measuring range of probe. Weather fine.	28/06/2019	10:44	7.51	0.56	6.98	15.6	800																				
SW3-06	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/07/2019	12:59	4.12	0.83	6.94	16.1	110																				
SW3-06	No visible flow, low water level. Rain.	12/10/2019	8:45	4.11	1.10	7.42	18.0	2	1	7	0.02	0.38	13	50	50													
SW3-06	No visible flow, very low water level. Overcast.	24/12/2019	12:10	7.43	1.64	7.64	26.7	127																				
SW3-06	Dry, not sampled.	16/01/2020	9:20																									
SW3-06	Upstream and downstream sites connected. High flow, high water level. Rain.	18/01/2020	12:51	6.57	0.09	6.48	21.6	>1000	1	492	0.15	1.36	13	50	50													
SW3-06	Upstream and downstream sites connected. Medium flow, very high water level. Rain.	7/02/2020	10:00	5.51	0.08	6.55	22.4	126																				
SW3-06	Upstream and downstream sites connected. Low flow. Sampled at bridge abutment due to very high water level. Overcast.	10/02/2020	11:02	5.64	0.08	6.55	25.2	34																				

SW3-06 - Unnamed tributary of Coldstream River

Wet Event Monitoring

[illegible]

SW3-06 - Unnamed tributary of Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-05	Dry	6/12/2016																										
SW3-05	Very low water level, no flow. Turbidity reading exceeded maximum range of probe.	7/01/2017		2.45	0.84	5.57	25.2	800	1	272	0.08	1.12	50	50	50													
SW3-05	Dry	28/02/2017																										
SW3-05	Dry	7/03/2017																										
SW3-05	Low flow. Overnight rainfall. No connection between upstream and downstream monitoring sites. Turbidity reading exceeded maximum range of probe.	14/03/2017		1.90	0.60	5.94	22.0	800	2	578	0.22	1.80	50	50	50													
SW3-05	Weather showers. Connected. Water level high, slight flow.	14/06/2017		6.25	0.10	6.21	16.6	58																				
SW3-05	Dry	10/10/2017																										
SW3-05	Upstream and downstream sites connected. Slight flow. Low water level. Turbidity reading exceeded maximum range of probe. Rain.	16/10/2017		4.81	0.47	8.38	20.9	800																				
SW3-05	Not connected, moderate water level, no flow. Turbidity reading exceeded maximum range of probe.	6/11/2017		2.63	0.54	6.92	21.6	800																				
SW3-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		3.37	0.58	6.91	26.9	658	1	822	0.07	0.94	13	50	50													
SW3-05	Upstream and downstream sites connected. Moderate to high flow, high water level. Overcast.	22/12/2017		4.25	0.45	5.94	24.8	262																				
SW3-05	Upstream and downstream sites connected. Low flow, moderate to high water level. Weather fine.	4/01/2018		2.13	0.13	6.08	26.3	75																				
SW3-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		6.08	1.12	6.28	28.8	189	1	243	0.09	0.86	13	50	50													
SW3-05	Upstream and downstream sites connected. Low flow, low water level. Overcast.	21/02/2018		3.78	0.81	6.30	25.1	220	1	700	0.04	1.68	13	50	50													
SW3-05	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	7/03/2018		6.46	0.41	6.32	21.7	504																				
SW3-05	Upstream and downstream sites connected. No visible flow, very low water level. Rain. Turbidity reading exceeded maximum range of probe.	22/03/2018		5.06	0.45	6.75	27.0	800	1	2020	0.04	1.21	13	50	50													
SW3-05	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/04/2018		5.23	0.64	6.96	23.5	18	1	1	0.02	0.46	13	50	50													
SW3-05	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	27/04/2018		4.99	0.45	6.94	19.7	77																				
SW3-05	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	8/06/2018	13:00	5.54	0.36	6.30	14.1	549																				
SW3-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	28/06/2018	9:46	4.87	0.82	6.29	13.1	120	1	37	0.15	0.82	13	50	50													
SW3-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	14:26	4.42	0.57	6.85	18.7	105	1	53	0.04	0.86	13	50	50													
SW3-05	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	7/09/2018	12:29	4.81	0.43	6.77	19.7	124																				

SW3-06 - Unnamed tributary of Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW3-05	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	6/10/2018	12:59	4.75	0.83	6.64	21.8	151	1	57	0.04	2.31	13	50	50													
SW3-05	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	12/10/2018	11:12	6.76	0.53	7.37	19.0	205																				
SW3-05	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	14/12/2018	13:38	3.63	1.12	7.71	26.6	63																				
SW3-05	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	17/12/2018	15:26	4.62	0.13	6.73	25.2	209	1	130	0.05	1.45	13	50	50													
SW3-05	Dry, not sampled.	23/02/2019	11:09																									
SW3-05	Dry, not sampled.	16/03/2019	12:20																									
SW3-05	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	20/04/2019	12:32	4.02	0.63	7.44	22.0	505	1	181	0.07	1.46	13	50	50													
SW3-05	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	16/05/2019	16:10	6.79	1.07	6.87	17.9	148																				
SW3-05	Upstream and downstream sites connected. Very low flow, low water level. Rain.	24/06/2019	11:15	8.08	0.81	7.58	12.1	0	1	972	0.06	0.29	13	50	50													
SW3-05	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	28/06/2019	10:50	5.58	0.58	6.72	14.5	628																				
SW3-05	Upstream and downstream sites not connected. Very low flow, low water level. Overcast.	5/07/2019	13:02	5.16	0.94	6.67	14.3	96																				
SW3-05	Dry, not sampled.	12/10/2019	9:40																									
SW3-05	Dry, not sampled.	24/12/2019	12:07																									
SW3-05	Dry, not sampled.	16/01/2020	9:24																									
SW3-05	Upstream and downstream sites connected. High flow, high water level. Rain.	18/01/2020	12:45	6.26	0.09	6.45	21.6	825	1	304	0.20	1.56	13	50	50													
SW3-05	Upstream and downstream sites connected. Medium flow, very high water level. Overcast.	7/02/2020	9:58	5.72	0.08	6.31	22.5	125																				
SW3-05	Upstream and downstream sites connected. Low flow. Sampled at bridge abutment due to very high water level. Overcast.	10/02/2020	10:59	8.12	0.08	6.55	25.3	28																				
SW3-05	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	27/03/2020	14:01	3.09	0.59	6.50	21.4	169	1	60	0.06	0.87	13	50	50													
SW3-05	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	31/03/2020	9:58	5.05	0.42	6.43	21.3	110	1	34	0.06	1.28	13	50	50													
SW3-05	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/04/2020	11:43	3.89	0.24	6.68	23.0	191																				
SW3-05	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	9:40	4.59	0.41	6.93	16.5	253	1	84	0.08	1.36	13	50	50													
SW3-05	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	8/08/2020	12:52	7.89	0.29	5.63	15.8	68																				
SW3-05	Upstream and downstream sites connected. Medium flow, very high water level. Rain.	16/12/2020	11:23	6.37	0.04	6.43	23.2	82	1	27	0.03	0.78	15	5	50	6.680	0.001	0.0010	0.002	0.002	2.630	0.005	0.089	0.0001	0.003	0.001	0.0005	0.015

SW3-06 - Unnamed tributary of Coldstream River

Wet Event Monitoring

[illegible]

SW3-08 - Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-08		3/08/2016		5.12	0.17	6.05	15.8	4																					
SW3-08	Flowing	8/09/2016		4.15	0.17	6.58	17.8	37	2	40	0.05	0.87	50	50	50														
SW3-08		6/10/2016		2.28	0.19	6.31	16.8	98																					
SW3-08	Accurate turbidity reading could not be obtained	1/11/2016		1.70	0.20	6.66	22.9		1	18	0.03	0.59	50	50	50														
SW3-08		8/12/2016		4.01	0.21	6.46	25.2	19																					
SW3-08	Very low water level, no flow and not connected with SW3-07	13/01/2017		2.62	0.22	6.28	29.9	102	1	37	0.11	1.65	50	160	50														
SW3-08	Very low water level, no flow and not connected with SW3-07	1/02/2017		2.46	0.22	6.86	33.0	34																					
SW3-08	Visible flow	24/03/2017		1.23	0.12	5.93	25.1	5	1	3	0.03	1.06	50	50	50														
SW3-08	U/s and d/s sites connected.	24/04/2017		2.51	0.14	6.41	19.8	1																					
SW3-08	Upstream and downstream sites connected. No visible flow. Low water level. Samples taken amongst aquatic macrophytes. Weather fine.	11/05/2017		3.93	0.12	6.87	21.4	2	1	11	0.03	0.50	50	50	50														
SW3-08	Weather fine. Connected. Water level low	8/06/2017		5.08	0.15	6.28	13.9	3																					
SW3-08	Upstream and downstream sites connected. Low flow. Low to moderate water level. Weather fine.	24/07/2017		7.47	0.14	7.18	13.8	43	1	2	0.02	0.50	13	50	50														
SW3-08	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	3/08/2017		5.65	0.14	6.85	11.9	3																					
SW3-08	Weather fine. U/S and D/S connected. No observed flow. Low water level. Replicate 1 taken.	4/09/2017		6.85	0.17	7.00	22.7	2	1	3	0.02	0.35	13	50	50														
SW3-08	Upstream and downstream sites connected. Low water level. Weather fine.	5/10/2017		5.16	0.22	7.39	22.4	7																					
SW3-08	Upstream and downstream sites connected. Low water level. Weather fine.	2/11/2017		3.13	0.18	6.80	25.3	8	1	7	0.02	0.44	13	50	50														
SW3-08	Upstream and downstream sites connected. Minimal flow, low to moderate water level. Temporary rock blocking approx. 80% of waterway. Weather fine.	6/12/2017		3.09	0.18	6.63	25.9	52																					
SW3-08	Upstream and downstream connected. No visible flow, low water level. Weather fine.	23/01/2018		3.88	0.14	6.08	34.7	67	1	50	0.05	1.28	13	50	50														
SW3-08	Upstream and downstream sites connected. Very low flow, very low water level. Overcast.	13/02/2018		1.00	0.14	6.35	27.1	9																					
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/03/2018		1.69	0.12	6.52	29.4	12	1	24	0.03	0.74	13	50	50														
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	11/04/2018		0.65	0.14	6.37	23.4	85																					
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/05/2018		1.43	0.13	5.95	19.6	5	1	25	0.04	0.84	13	50	50														

SW3-08 - Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-08	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	25/06/2018	12:41	2.62	0.15	6.40	11.8	6																				
SW3-08	Upstream and downstream sites connected. No visible flow, medium water level. Sampled using bucket due to distance to water, unable to obtain turbidity or oxygen reading. Weather fine.	24/07/2018	16:30		0.01	6.17	16.2		1	56	0.07	1.08	13	50	50													
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	10/08/2018	10:42	5.78	0.17	6.54	14.5	4																				
SW3-08	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	17/09/2018	14:05	5.50	0.17	6.71	20.4	5	1	7	0.03	0.61	13	50	50													
SW3-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	26/10/2018	14:22	2.63	0.37	6.17	25.0	88																				
SW3-08	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	5/11/2018	14:18	6.32	0.17	6.33	31.2	27	1	24	0.06	1.37	13	50	50													
SW3-08	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	4/12/2018	12:00	2.22	0.20	7.81	25.1	15																				
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	9/01/2019	13:22	3.10	0.15	6.49	29.2	27	1	38	0.12	2.06	13	50	50													
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	7/02/2019	10:25	3.61	0.16	6.70	25.7	12																				
SW3-08	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2019	11:42	4.13	0.17	7.11	24.3	73	1	17	0.06	1.37	13	50	50													
SW3-08	Upstream and downstream sites connected. No visible flow, very low water level. Weather drizzle.	24/04/2019	14:16	4.29	0.18	7.16	24.2	15																				
SW3-08	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	2/05/2019	13:51	4.67	0.15	7.05	22.6	27	1	71	0.32	2.48	13	50	50													
SW3-08	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	14/06/2019	11:27	3.89	0.17	6.89	17.8	11																				
SW3-08	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/07/2019	11:35	3.59	0.18	6.16	16.2	76	1	26	0.07	1.20	13	50	50													
SW3-08	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	19/08/2019	9:29	5.07	0.18	7.65	15.5	2																				
SW3-08	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	19/09/2019	11:10	2.35	0.15	6.70	20.4	6	1	10	0.07	1.16	13	50	50													
SW3-08	No visible flow, very low water level. Weather fine.	3/10/2019	11:49	2.05	0.20	6.83	19.1	10																				
SW3-08	No visible flow, very low water level. Overcast.	5/11/2019	9:30	4.35	0.28	6.50	22.3	27	1	42	0.21	2.18	50	50	50													
SW3-08	No visible flow, very low water level. Sampled approx. 50 m downstream, usual monitoring point was dry. Weather fine.	4/12/2019	12:51	6.58	0.21	7.84	29.8	7																				
SW3-08	No visible flow, very low water level. Weather fine.	8/01/2020	13:31	5.41	0.25	7.85	32.9	7	1	9	0.02	1.45	13	13	50													

SW3-08 - Coldstream River

Dry Event Monitoring

[illegible]

SW3-08 - Coldstream River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Section3 SW05		26/11/2013		6.00	0.94	6.40	24.0	17	3	10	0.01	0.70																
Section3 SW05		19/12/2013		5.57	0.16	5.81	23.7	6	3	3	0.25	0.50																
Upstream Monitoring																												
SW3-07		3/08/2016		5.19	0.17	5.95	14.3	4																				
SW3-07	Flowing	8/09/2016		5.47	0.17	6.78	17.3	112	1	33	0.05	1.01	50	50	50													
SW3-07	Slight flow	6/10/2016		1.35	0.20	6.61	16.7	2																				
SW3-07		1/11/2016		1.31	0.22	6.77	21.5	395		31	0.10	1.59	50	200	50													
SW3-07	Dry	8/12/2016																										
SW3-07	Dry	13/01/2016																										
SW3-07	Dry	1/02/2017																										
SW3-07	Visible flow	24/03/2017		1.84	0.12	5.99	25.2	4	1	6	0.03	1.07	50	50	50													
SW3-07	U/s and d/s sites connected.	24/04/2017		2.44	0.14	6.39	20.5	1																				
SW3-07	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	11/05/2017		5.85	0.14	6.39	19.3	0	1	5	0.02	0.27	50	50	50													
SW3-07	Weather fine. Connected. Water level low.	8/06/2017		8.01	0.15	6.57	16.1	2																				
SW3-07	Upstream and downstream sites connected. Low flow. Low water level. Weather fine.	24/07/2017		6.45	0.14	6.82	11.9	169	1	10	0.02	0.60	13	50	50													
SW3-07	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	3/08/2017		6.78	0.16	6.75	11.3	4																				
SW3-07	Weather fine. U/S and D/S connected. No observed flow. Low water level.	4/09/2017		6.32	0.17	6.43	18.2	20	1	9	0.02	0.49	13	50	50													
SW3-07	Upstream and downstream sites not connected. Low water level. Abundant macrophytes present. Weather fine.	5/10/2017		4.27	0.21	7.62	22.1	5																				
SW3-07	Upstream and downstream sites not connected. Low water level.	2/11/2017		5.95	0.21	7.15	26.0	20	1	8	0.02	0.57	13	50	50													
SW3-07	Upstream and downstream sites connected. Minimal flow, low to moderate water level. Temporary rock blocking approx. 80% of waterway. Weather fine.	6/12/2017		3.23	0.17	6.56	26.7	4																				
SW3-07	Upstream and downstreamconnected. No visible flow, low water level. Weather fine.	23/01/2018		3.47	0.16	6.24	28.9	23	1	34	0.05	1.45	13	50	50													
SW3-07	Upstream and downstream sites connected. Very low flow, very low water level. Overcast.	13/02/2018		1.40	0.16	6.58	27.0	14																				
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/03/2018		0.60	0.15	6.48	25.8	24	1	38	0.04	1.03	13	50	50													
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	11/04/2018		0.29	0.12	6.08	23.5	12																				

Dry Event Monitoring

SW3-08 - Coldstream River

Dry Event Monitoring

[illegible]

SW3-08 - Coldstream River

Wet Event Monitoring

[illegible]

SW3-08 - Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	27/08/2018	13:56	3.55	0.17	6.97	17.1	14	1	13	0.03	0.54	13	50	50													
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	7/09/2018	12:23	4.11	0.16	6.71	21.3	15																				
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	6/10/2018	12:50	4.70	0.17	6.44	22.9	15	2	65	0.10	1.08	13	50	50													
SW3-08	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	12/10/2018	11:05	4.60	0.18	7.29	19.7	13																				
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	14/12/2018	13:28	4.84	0.20	7.58	29.1	6																				
SW3-08	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	17/12/2018	15:09	3.45	0.11	6.71	26.1	157	1	101	0.04	1.75	13	50	50													
SW3-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	23/02/2019	11:05	3.29	0.15	7.03	24.0	1	1	9	0.03	0.96	13	50	50													
SW3-08	Upstream and downstream sites not connected. No visible flow, low water level. Rain.	16/03/2019	12:22	4.41	0.18	6.98	24.1	20																				
SW3-08	Upstream and downstream sites connected. No visible flow, very low water level. Overcast.	20/04/2019	12:55	2.42	0.14	6.79	21.7	6	1	13	0.08	1.45	13	50	50													
SW3-08	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	16/05/2019	15:49	4.58	0.15	6.38	17.6	13																				
SW3-08	Upstream and downstream sites not connected. No visible flow, very low water level. Rain.	24/06/2019	11:46	6.04	0.17	6.48	11.7	49	1	29	0.07	1.16	13	50	50													
SW3-08	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	28/06/2019	11:01	5.47	0.16	6.49	17.1	33																				
SW3-08	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/07/2019	12:46	5.00	0.17	6.32	17.5	29																				
SW3-08	No visible flow, very low water level. Rain.	12/10/2019	8:58	0.00	0.21	6.72	16.2	47	1	37	0.19	1.93	13	50	50													
SW3-08	No visible flow, very low water level. Overcast.	24/12/2019	12:19	4.79	0.23	7.16	26.3	7																				
SW3-08	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	16/01/2020	9:32	8.02	0.26	7.41	25.5	8	1	11	0.07	1.20	13	50	50													
SW3-08	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	18/01/2020	12:32	5.56	0.07	6.33	21.6	351	1	74	0.07	1.36	13	50	50													
SW3-08	Upstream and downstream sites connected. Medium flow, very high water level. Drizzle.	7/02/2020	10:11	5.49	0.07	6.55	22.2	123																				
SW3-08	Upstream and downstream sites connected. Medium flow. Sampled at bridge abutment due to very high water level. Overcast.	10/02/2020	11:12	4.09	0.07	6.52	24.0	61																				
SW3-08	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	27/03/2020	13:38	7.79	0.16	6.47	23.9	16	1	7	0.03	0.78	13	50	50													
SW3-08	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	31/03/2020	10:14	6.99	0.15	6.58	23.7	30	1	8	0.02	0.68	13	50	50													
SW3-08	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	4/04/2020	11:33	4.24	0.15	6.13	23.9	64																				

SW3-08 - Coldstream River

Wet Event Monitoring

[illegible]

SW3-08 - Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-07	Dry	7/03/2017																										
SW3-07	Dry	14/03/2017																										
SW3-07	Weather showers. Connected. Water level very high, fast flow.	14/06/2017		5.99	0.07	5.91	16.7	30																				
SW3-07	No safe access to work site	10/10/2017																										
SW3-07	Upstream and downstream sites connected. Slight flow. High water level.	16/10/2017		7.11	0.16	8.39	21.8	230																				
SW3-07	Upstream and downstream sites connected. Slight flow. High water level.	6/11/2017		3.63	0.22	7.04	23.8	8																				
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Weather, fine.	2/12/2017		5.73	0.24	7.12	28.5	42	1	16	0.02	0.74	13	50	50													
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	22/12/2017		2.82	0.18	6.39	26.8	120																				
SW3-07	Upstream and downstream sites connected. High flow, high water level. Weather fine.	4/01/2018		1.53	0.11	5.78	24.9	16																				
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/02/2018		6.33	0.17	6.48	25.9	0	1	15	0.03	0.89	13	50	50													
SW3-07	Unable to access site due to crane lifting beams.	21/02/2018																										
SW3-07	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	7/03/2018		3.12	0.14	6.38	24.3	80																				
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	22/03/2018		0.95	0.13	6.47	26.2	26	1	16	0.04	0.94	13	50	50													
SW3-07	No access - crane lifting	20/04/2018																										
SW3-07	No access - crane lifting works	27/04/2018																										
SW3-07	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	8/06/2018	12:41	5.94	0.13	6.18	17.0	104																				
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	28/06/2018	9:30	10.44	0.16	5.75	13.1	1	1	9	0.04	0.72	13	50	50													
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	27/08/2018	14:01	3.29	0.17	6.84	16.9	17	1	17	0.04	0.70	13	50	50													
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	7/09/2018	12:20	4.12	0.16	6.50	20.9	15																				
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	6/10/2018	12:46	2.98	0.17	6.19	22.1	7	1	16	0.03	0.73	13	50	50													
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	12/10/2018	11:01	3.01	0.19	7.47	19.2	15																				
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	14/12/2018	13:26	5.79	0.09	7.89	27.6	13																				
SW3-07	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	17/12/2018	15:11	2.82	0.13	6.57	25.8	49	1	19	0.03	0.90	13	50	50													

SW3-08 - Coldstream River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW3-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	23/02/2019	11:09	6.28	0.17	7.22	19.4	2	1	43	0.03	1.17	13	50	50													
SW3-07	Upstream and downstream sites not connected. No visible flow, low water level. Rain.	16/03/2019	12:26	7.79	0.27	7.65	22.5	67																				
SW3-07	Upstream and downstream sites connected. No visible flow, very low water level. Overcast.	20/04/2019	13:01	6.78	0.20	7.47	20.0	17	1	25	0.08	1.52	13	50	50													
SW3-07	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	16/05/2019	15:52	10.34	0.22	6.98	16.3	14																				
SW3-07	Upstream and downstream sites not connected. No visible flow, very low water level. Rain.	24/06/2019	11:42	11.00	0.22	7.54	11.0	95	1	26	0.04	0.92	13	50	50													
SW3-07	Upstream and downstream sites not connected. Sampled in a small pool of water with no visible flow and very low water level. Weather fine.	28/06/2019	11:04	7.26	0.17	6.91	14.3	50																				
SW3-07	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/07/2019	12:49	10.53	0.17	7.40	14.0	53																				
SW3-07	Dry, not sampled.	12/10/2019	10:08																									
SW3-07	Dry, not sampled.	24/12/2019	12:17																									
SW3-07	Dry, not sampled.	16/01/2020	9:25																									
SW3-07	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	18/01/2020	12:27	8.60	0.06	6.24	21.6	502	1	182	0.09	0.98	13	50	50													
SW3-07	Upstream and downstream sites connected. Medium flow, very high water level. Overcast.	7/02/2020	10:08	5.56	0.07	6.43	22.2	120																				
SW3-07	Upstream and downstream sites connected. Medium flow. Sampled at bridge abutment due to very high water level. Overcast.	10/02/2020	11:10	4.75	0.07	6.60	24.4	48																				
SW3-07	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	27/03/2020	13:40	7.14	0.16	6.44	23.8	16	1	11	0.04	1.00	13	50	50													
SW3-07	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	31/03/2020	10:17	5.66	0.15	6.42	22.6	28	1	7	0.02	0.72	13	50	50													
SW3-07	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	4/04/2020	11:31	4.32	0.14	6.00	23.9	61																				
SW3-07	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	9:54	6.76	0.15	7.08	15.2	21	1	12	0.04	2.70	13	50	50													
SW3-07	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	8/08/2020	13:06	7.74	0.08	5.68	14.1	20																				
SW3-07	Upstream and downstream sites connected. Medium flow, very high water level. Rain.	16/12/2020	11:40	8.59	0.03	6.64	22.9	79	1	30	0.02	0.89	15	5	50	5.170	0.001	0.0010	0.002	0.002	2.390	0.005	0.140	0.0001	0.003	0.001	0.0005	0.051
SW3-07	Upstream and downstream sites connected. Low flow, medium water level. Rain.	17/02/2021	11:30	9.42	0.12	6.94	23.4	17																				
SW3-07	Upstream and downstream sites connected. Very low flow, high water level. Overcast.	3/05/2021	13:20	5.66	0.12	6.10	19.7	12	1	5	0.02	0.44	13	50	50	1.650	0.001	0.0010	0.002	0.002	2.130	0.005	0.077	0.0001	0.003	0.001	0.0005	0.007

SW3-08 - Coldstream River

Wet Event Monitoring

[illegible]

SW3-10 - Pillar Valley Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-10	On private property - no access to site	2/08/2016																											
SW3-10	On private property - no access to site	8/09/2016																											
SW3-10	Slight flow	6/10/2016		3.76	0.22	6.60	17.0	90																					
SW3-10		3/11/2016		2.71	0.24	6.55	23.7	18	1	16	0.04	1.01	50	50	50														
SW3-10	Accurate turbidity reading could not be obtained	8/12/2016		4.66	0.49	6.36	24.3																						
SW3-10	Very low water level, no flow. Not connected with SW3-09	13/01/2017		11.09	0.18	7.27	29.0		1	27	0.05	1.56	50	50	50														
SW3-10	Very low water level, no flow. Not connected with SW3-09	1/02/2017		4.97	0.25	7.18	28.8	34																					
SW3-10	Visible flow	24/03/2017		1.51	0.15	5.85	24.5	5	1	7	0.03	0.96	50	50	50														
SW3-10	U/s and d/s sites connected.	24/04/2017		5.32	0.16	6.63	19.8	1																					
SW3-10	Upstream and downstream sites connected. Low flow, low water level. Silt curtain / hydrocarbon boom upstream of site. Nearby cattle. Weather fine.	11/05/2017		5.28	0.16	6.57	17.8	2	1	2	0.02	0.36	50	50	50														
SW3-10	Weather fine. Connected. High flow. Water level low. Sample site adjacent to cattle crossing.	8/06/2017		4.05	0.16	6.50	14.5	3																					
SW3-10	Upstream and downstream sites connected. Low flow. Low water level. Weather fine.	24/07/2017		6.94	0.14	6.71	11.3	4	1	1	0.02	0.40	13	50	50														
SW3-10	Upstream and downstream sites connected. Moderate flow, moderate water level. Weather fine.	3/08/2017		7.48	0.14	6.86	11.5	4																					
SW3-10	Weather fine. U/S and D/S connected. No observed flow. Low water level.	4/09/2017		7.51	0.17	6.32	17.5	5	1	11	0.02	0.49	13	50	50														
SW3-10	Upstream and downstream sites connected. Low water level. Weather fine.	5/10/2017		4.23	0.23	6.73	19.9	5																					
SW3-10	Upstream and downstream sites connected. Low water level. Weather fine.	2/11/2017		4.13	0.22	6.68	25.7	26	1	11	0.02	0.90	160	2100	1400														
SW3-10	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	6/12/2017		1.70	0.19	6.54	22.5	22																					
SW3-10	Upstream and downstream connected. Low flow, low water level. Weather fine.	23/01/2018		5.42	0.20	6.42	30.2	10	1	21	0.03	1.01	13	50	50														
SW3-10	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	13/02/2018		2.22	0.18	6.37	26.0	25																					
SW3-10	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	20/03/2018		4.55	0.21	6.74	27.9	12	1	8	0.02	0.83	13	50	50														
SW3-10	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	11/04/2018		2.46	0.17	6.56	22.8	12																					
SW3-10	Unable to sample due to unsafe access (crane lifting bridge girders).	8/05/2018																											
SW3-10	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	25/06/2018	12:10	4.89	0.19	6.39	11.7	20																					

SW3-10 - Pillar Valley Creek

Dry Event Monitoring

[illegible]

SW3-10 - Pillar Valley Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	15/04/2020	11:00	5.11	0.16	6.14	19.8	13																				
SW3-10	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	14/05/2020	10:39	5.73	0.18	7.18	17.5	16	1	10	0.02	0.69	13	50	50													
SW3-10	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	15/06/2020	10:04	7.14	0.17	6.93	15.9	8																				
SW3-10	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2020	11:58	4.52	0.25	6.91	22.0	34	1	10	0.02	0.56	13	50	50	0.310	0.001	0.0010	0.002	0.002	4.910	0.005	0.860	0.0001	0.003	0.001	0.0005	0.008
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	25/05/2021	12:40	6.74	0.12	5.84	17.3	26	1	4	0.02	0.36	13	50	50	1.920	0.001	0.0010	0.002	0.002	2.490	0.005	0.078	0.0001	0.003	0.001	0.0005	0.007
SW3-10	Upstream and downstream connected. Low flow. Low water level. Overcast.	18/11/2021	9:39	5.24	0.21	8.32	22.2	16	1	5	0.03	0.75	13	50	50	1.560	0.002	0.0010	0.001	0.002	2.680	0.005	0.250	0.0001	0.003	0.002	0.0015	0.005
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	5/05/2022	11:43	6.27	0.10	7.27	18.6	40	1	23	0.02	0.42	13	50	50	0.190	0.001	0.0010	0.001	0.002	0.450	0.005	0.050	0.0001	0.003	0.001	0.0005	0.007
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.29	7.08		19	3	21	0.04	1.06	20	50	50	1.432	0.001	0.0010	0.002	0.002	3.098	0.005	0.520	0.0001	0.003	0.001	0.0009	0.053
P20				3.19	0.16	6.27																						
St Dev					0.13	0.70																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW06		14/03/2013		6.01	0.46	6.50	23.5	20	3	10	0.06	0.80																
Section3 SW06		21/03/2013		6.16	0.52	3.11	23.6	16	3	5	0.04	0.60																
Section3 SW06		23/04/2013		8.45	0.12	6.63	19.5	16	3	10	0.01	0.60																
Section3 SW06		22/05/2013		9.82	0.26	6.98	14.8	12	3	7	0.03	0.50																
Section3 SW06		27/06/2013		9.73	0.15	6.83	15.8	11	3	3	0.03	0.33																
Section3 SW06		24/07/2013		9.64	0.18	6.28	16.3	10	3	5	0.01	0.44																
Section3 SW06		21/08/2013		9.44	0.17	7.09	14.7	7	3	6	0.04	0.02																
Section3 SW06		25/09/2013		8.63	0.18	6.40	23.1	18	3	16	0.01	0.42																
Section3 SW06		23/10/2013		8.55	0.26	6.17	29.5	20	3	14	0.02	0.72																
Section3 SW06		28/11/2013		6.08	0.20	5.68	25.7	17	3	15	0.02	0.74																
Section3 SW06		18/12/2013		8.55	0.18	5.67	27.2	27	3	11	0.25	0.60																
Upstream Monitoring																												

SW3-10 - Pillar Valley Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-09	On private property - no access to site	2/08/2016																										
SW3-09	On private property - no access to site	8/09/2016																										
SW3-09	Slight flow	6/10/2016		3.67	0.22	6.67	16.4	7	1	12	0.03	1.75	50	170	50													
SW3-09	No flow	3/11/2016		7.08	0.24	6.76	21.4	2																				
SW3-09		8/12/2016		2.75	0.74	6.74	24.1	11																				
SW3-09	Very low, no flow. Not connected with SW3-10	13/01/2017		4.25	0.59	7.20	27.5	16	1	12	0.02	1.22	50	50	50													
SW3-09	Very low, no flow. Not connected with SW3-10	1/02/2017		4.52	0.61	7.84	28.2	4																				
SW3-09	Visible flow	24/03/2017		1.74	0.15	5.90	24.5	5	1	4	0.04	1.04	50	50	50													
SW3-09	U/s and d/s sites connected.	24/04/2017		9.16	0.16	6.64	19.2	1																				
SW3-09	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	11/05/2017		5.11	0.15	6.71	17.7	2	1	1	0.02	0.38	50	50	50													
SW3-09	Weather fine. Connected. High flow. Water level low.	8/06/2017		5.00	0.15	6.49	13.5	3																				
SW3-09	Upstream and downstream sites connected. Low flow. Low water level. Weather fine.	24/07/2017		6.74	0.14	6.62	11.1	4	1	6	0.02	0.40	13	50	50													
SW3-09	Upstream and downstream sites connected. Moderate flow, moderate water level. Weather fine.	3/08/2017		6.80	0.14	6.81	11.3	4																				
SW3-09	Weather fine. U/S and D/S connected. No observed flow. Low water level.	4/09/2017		8.12	0.17	6.38	17.3	3	1	4	0.02	0.54	13	50	50													
SW3-09	Upstream and downstream sites connected. Low water level. Weather fine.	5/10/2017		2.28	0.22	6.98	18.3	1																				
SW3-09	Upstream and downstream sites connected. Low water level. Weather fine.	2/11/2017		3.02	0.23	6.90	22.0	2	1	24	0.05	0.91	13	50	50													
SW3-09	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	6/12/2017		3.69	0.20	6.54	24.7	21																				
SW3-09	Upstream and downstream connected. Low flow, low water level. Weather fine.	23/01/2018		1.86	0.20	6.26	27.5	9	1	36	0.04	1.21	13	50	50													
SW3-09	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	13/02/2018		0.99	0.18	6.40	25.7	50																				
SW3-09	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	20/03/2018		2.00	0.20	6.72	27.2	9	1	21	0.03	1.06	13	50	50													
SW3-09	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	11/04/2018		2.09	0.17	6.43	22.0	5																				
SW3-09	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	8/05/2018		4.97	0.19	6.04	19.4	6	1	4	0.02	0.70	13	50	50													
SW3-09	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	25/06/2018	12:13	5.09	0.18	6.44	10.7	7																				
SW3-09	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	24/07/2018	15:44	6.92	0.19	6.27	12.8	5	1	38	0.03	1.17	13	50	50													
SW3-09	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	10/08/2018	11:24	4.05	0.20	7.00	12.5	33																				

SW3-10 - Pillar Valley Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-09	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	17/09/2018	13:36	6.01	0.33	6.70	17.9	12	1	9	0.02	0.98	13	50	50													
SW3-09	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	26/10/2018	13:52	3.31	0.18	5.80	24.9	8																				
SW3-09	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	5/11/2018	13:34	3.67	0.20	6.48	26.1	9	1	3	0.03	0.99	13	50	50													
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	4/12/2018	12:47	2.05	0.25	7.75	24.3	18																				
SW3-09	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	9/01/2019	12:46	2.98	0.20	6.84	26.4	9	1	10	0.05	1.19	13	50	50													
SW3-09	Upstream and downstream sites connected. No visible flow, very low water level. Overcast.	7/02/2019	11:06	2.99	0.28	7.06	25.0	15																				
SW3-09	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	20/03/2019	11:19	3.48	0.29	7.42	23.1	17	1	6	0.08	0.79	13	50	50													
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	24/04/2019	13:56	4.14	0.25	7.26	21.4	0																				
SW3-09	Upstream and downstream sites connected.Very low flow, low water level. Weather drizzle.	2/05/2019	13:26	7.37	0.24	7.34	20.5	0	1	26	0.16	1.20	13	50	50													
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	14/06/2019	11:01	3.99	0.29	7.28	15.5	4																				
SW3-09	Upstream and downstream sites not connected. No visible flow, low water level. Evidence of cattle disturbance. Overcast.	4/07/2019	12:04	3.46	0.27	6.63	15.3	141	1	77	0.05	1.11	13	50	50													
SW3-09	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	19/08/2019	9:46	1.36	0.33	7.07	13.7	40																				
SW3-09	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	19/09/2019	11:26	4.14	0.31	6.74	20.6	4	1	4	0.03	0.41	13	50	50													
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	3/10/2019	12:10	4.48	0.42	7.17	22.6	5																				
SW3-09	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/11/2019	9:48	4.71	0.44	7.01	22.2	5	1	5	0.02	0.40	50	50	50													
SW3-09	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	4/12/2019	12:27	7.43	0.47	7.43	28.2	6																				
SW3-09	Insufficient water to sample.	8/01/2020	13:16																									
SW3-09	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	18/02/2020	12:42	3.33	0.11	6.17	26.7	21																				
SW3-09	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/03/2020	12:21	3.45	0.12	6.15	26.0	23	1	14	0.04	0.86	13	50	50													
SW3-09	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	15/04/2020	10:56	4.98	0.16	6.21	19.7	12																				
SW3-09	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	14/05/2020	10:43	5.58	0.18	6.41	16.4	14	1	5	0.02	0.45	13	50	50													

SW3-10 - Pillar Valley Creek

Dry Event Monitoring

[illegible]

SW3-10 - Pillar Valley Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Downstream Monitoring																												
SW3-10	Private property - no access	4/08/2016																										
SW3-10	Private property - no access	25/08/2016																										
SW3-10		10/11/2016		3.38	0.25	6.95	26.8	3	1	15	0.03	0.76	50	50	50													
SW3-10		6/12/2016		8.04	0.45	7.37	27.5	65																				
SW3-10	No flow, very turbid water	7/01/2017		4.82	0.13	5.53	26.0	583	1	290	0.03	4.01	50	100	50													
SW3-10	Very low water level, no flow and not connected to SW3-09	27/01/2017		5.66	0.24	6.54	26.3	31																				
SW3-10	Very low water level, no flow and not connected to SW3-09. Turbidity reading exceeded maximum range of probe.	28/02/2017		4.38	0.33	5.07	22.8	800																				
SW3-10	Very turbid	7/03/2017		4.13	0.22	6.05	23.9	518	1	320	0.11	4.80	50	100	50													
SW3-10	Slight visible flow. Overnight rainfall.	14/03/2017		4.53	0.27	6.56	21.6	454	1	242	0.10	2.10	50	50	50													
SW3-10	Weather showers. Connected. Water level high. Strong flow.	14/06/2017		5.70	0.07	6.03	16.7	32																				
SW3-10	Upstream and downstream sites connected. Water level low. Weather fine.	10/10/2017		3.16	0.21	7.93	22.9	6	1	6	0.05	0.63	13	50	50													
SW3-10	Upstream and downstream sites connected. Slight flow. High water level.	16/10/2017		4.31	0.19	8.36	20.4	113																				
SW3-10	Upstream and downstream sites connected. Slight flow. High water level.	6/11/2017		2.71	0.22	6.68	22.9	800																				
SW3-10	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		4.02	0.23	6.75	26.3	51	1	34	0.03	0.88	13	50	50													
SW3-10	Upstream and downstream sites connected, moderate to high flow, high water level. Overcast.	22/12/2017		4.70	0.12	6.12	25.8	73																				
SW3-10	Upstream and downstream sites connected. Moderate to high flow, high water level. Weather fine.	4/01/2018		2.26	0.11	5.87	26.0	43																				
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	5/02/2018		2.40	0.19	6.48	25.0	0	1	8	0.03	0.83	13	50	50													
SW3-10	Upstream and downstream sites connected. Low flow, low water level. Overcast.	21/02/2018		4.36	0.21	6.64	25.1	202	1	104	0.03	1.15	13	50	50													
SW3-10	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	7/03/2018		3.49	0.17	6.68	24.2	42																				
SW3-10	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	22/03/2018		3.73	0.20	6.67	24.8	220	1	126	0.03	0.87	13	50	50													
SW3-10	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	20/04/2018		2.57	0.17	6.19	22.4	4	1	4	0.02	0.78	13	50	50													
SW3-10	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	27/04/2018		3.50	0.17	6.80	19.8	6																				
SW3-10	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	8/06/2018	11:56	5.01	0.19	6.29	14.2	84																				

SW3-10 - Pillar Valley Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	28/06/2018	10:17	5.09	0.18	6.37	13.5	6	1	5	0.03	0.69	13	50	50													
SW3-10	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	27/08/2018	13:38	4.43	0.22	6.88	14.5	35	1	15	0.02	0.59	13	50	50													
SW3-10	Upstream and downstream sites connected. Medium flow, low water level. Overcast.	7/09/2018	12:02	5.40	0.19	6.71	16.2	11																				
SW3-10	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	6/10/2018	12:09	4.17	0.31	6.02	19.6	6	1	11	0.02	0.91	13	50	50													
SW3-10	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	12/10/2018	11:52	5.83	0.30	7.00	18.9	8																				
SW3-10	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	14/12/2018	12:40	4.58	0.29	7.29	24.2	50																				
SW3-10	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	17/12/2018	14:37	3.32	0.18	6.65	24.5	28	1	17	0.03	0.97	13	50	50													
SW3-10	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	23/02/2019	10:28	6.94	0.24	6.99	22.6	31	1	25	0.07	1.15	13	50	50													
SW3-10	Upstream and downstream sites connected. No visible flow, very low water level. Rain.	16/03/2019	12:06	5.36	0.36	7.09	23.5	751																				
SW3-10	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	20/04/2019	13:31	8.37	0.43	7.42	21.4	52	1	34	0.04	1.63	13	50	50													
SW3-10	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	16/05/2019	15:29	9.25	0.43	6.46	17.4	24																				
SW3-10	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	24/06/2019	12:50	8.66	0.44	7.85	12.4	42	1	31	0.02	0.59	13	50	50													
SW3-10	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	28/06/2019	11:21	6.18	0.36	6.28	16.0	189																				
SW3-10	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/07/2019	12:32	7.04	0.55	6.81	15.5	60																				
SW3-10	Upstream and downstream sites connected. Low flow, low water level. Overcast.	12/10/2019	9:19	9.33	0.00	7.37	15.5	261	1	284	0.06	1.38	13	50	50													
SW3-10	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	24/12/2019	12:33	3.14	0.56	6.80	24.4	0																				
SW3-10	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	16/01/2020	9:53	3.72	0.62	7.55	24.4	6	1	18	0.07	1.55	13	50	50													
SW3-10	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	18/01/2020	12:07	6.21	0.09	5.92	21.6	411	1	126	0.07	1.80	13	50	50													
SW3-10	Upstream and downstream sites connected. High flow, very high water level. Overcast.	7/02/2020	10:22	5.55	0.07	6.41	22.5	137																				
SW3-10	Upstream and downstream sites connected. High flow. Sampled at bridge abutment due to high water level. Overcast.	10/02/2020	11:25	9.44	0.07	6.47	24.9	75																				
SW3-10	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	27/03/2020	13:18	4.98	0.17	6.26	22.9	17	1	6	0.02	0.71	13	50	50													

SW3-10 - Pillar Valley Creek

Wet Event Monitoring

[illegible]

SW3-10 - Pillar Valley Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-09		6/12/2016		8.72	0.76	7.24	25.7	32																				
SW3-09	Water level low, no flow	7/01/2017		3.43	0.58	6.83	24.3	166	1	34	0.03	1.06	50	130	50													
SW3-09	Water level low, no flow	27/01/2017		4.77	0.62	7.23	25.8	4																				
SW3-09	Water level low, no flow	28/02/2017		3.04	0.55	7.47	21.8	101																				
SW3-09	Turbidity exceeded maximum range for in-situ sampling.	7/03/2017		2.49	0.23	6.45	23.9	800	1	348	0.15	3.50	50	50	50													
SW3-09	Slight visible flow. Overnight rainfall	14/03/2017		8.56	0.24	6.31	21.5	506	1	219	0.07	2.50	50	50	50													
SW3-09	Weather showers. Connected. Water level high. Strong flow.	14/06/2017		5.88	0.07	6.03	16.6	32																				
SW3-09	Upstream and downstream sites connected. Water level low. Weather fine.	10/10/2017		3.62	0.20	7.89	23.3	6	1	8	0.07	0.77	13	50	50													
SW3-09	Upstream and downstream sites connected. Slight flow. High water level.	16/10/2017		3.62	0.19	8.35	20.2	27																				
SW3-09	Upstream and downstream sites connected. Slight flow. High water level.	6/11/2017		8.65	0.20	6.99	22.6	5																				
SW3-09	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		3.73	0.21	6.71	25.1	4	1	9	0.03	0.73	13	50	50													
SW3-09	Upstream and downstream sites connected, moderate to high flow, high water level. Overcast.	22/12/2017		4.67	0.15	6.13	25.9	25																				
SW3-09	Upstream and downstream sites connected. Moderate to high flow, high water level. Weather fine.	4/01/2018		2.13	0.11	5.84	26.0	30																				
SW3-09	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	5/02/2018		3.20	0.19	6.50	25.7	0	1	8	0.04	1.07	13	50	50													
SW3-09	Upstream and downstream sites connected. Low flow, low water level. Overcast.	21/02/2018		1.41	0.20	6.60	23.4	10	1	14	0.04	0.90	13	50	50													
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	7/03/2018		3.23	0.17	6.65	23.8	166																				
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	22/03/2018		1.73	0.20	6.52	23.7	44	1	22	0.03	1.12	13	50	50													
SW3-09	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	20/04/2018		3.61	0.17	6.08	22.6	27	1	13	0.03	0.88	13	50	50													
SW3-09	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	27/04/2018		3.09	0.17	6.69	19.8	20																				
SW3-09	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	8/06/2018	12:00	5.59	0.19	6.19	13.8	13																				
SW3-09	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	28/06/2018	10:24	4.71	0.17	6.37	13.2	6	1	15	0.07	1.40	13	50	50													
SW3-09	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	27/08/2018	13:33	5.41	0.20	7.05	14.5	21	1	14	0.03	0.67	13	50	50													
SW3-09	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	7/09/2018	11:58	4.41	0.20	6.94	17.5	26																				
SW3-09	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	6/10/2018	12:14	5.05	0.31	6.23	19.7	8	1	3	0.02	0.73	13	50	50													

SW3-10 - Pillar Valley Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-09	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	12/10/2018	11:49	5.52	0.29	7.32	18.6	7																				
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	14/12/2018	12:44	4.59	0.26	7.49	25.7	93																				
SW3-09	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	17/12/2018	14:41	3.17	0.18	6.74	24.5	42	1	26	0.03	0.99	13	50	50													
SW3-09	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	23/02/2019	10:39	2.93	0.25	7.19	22.0	7	1	27	0.08	1.87	13	50	50													
SW3-09	Upstream and downstream sites connected. No visible flow, very low water level. Rain.	16/03/2019	11:59	7.03	0.22	7.22	20.7	27																				
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	20/04/2019	13:25	5.87	0.23	7.51	22.3	30	1	22	0.04	0.87	13	50	50													
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	16/05/2019	15:25	5.72	0.25	7.39	16.9	7																				
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	24/06/2019	13:09	4.49	0.27	7.05	12.8	65	1	16	0.02	0.45	13	50	50													
SW3-09	Upstream and downstream sites connected. Very low flow, medium water level. Evidence of cattle disturbance. Weather fine.	28/06/2019	11:17	4.41	0.29	6.46	15.6	111																				
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	5/07/2019	12:28	4.04	0.27	6.92	16.3	85																				
SW3-09	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	12/10/2019	9:24	0.55	0.37	6.59	16.6	332	1	87	0.08	0.83	13	50	50													
SW3-09	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	24/12/2019	12:31	4.02	0.48	6.93	26.0	6																				
SW3-09	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	16/01/2020	9:48	2.85	0.52	7.42	24.9	5	1	7	0.03	0.92	13	50	50													
SW3-09	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	18/01/2020	12:02	6.13	0.09	5.73	21.4	88	1	30	0.06	1.91	13	50	50													
SW3-09	Upstream and downstream sites connected. High flow, very high water level. Overcast.	7/02/2020	10:20	5.90	0.07	6.44	22.5	132																				
SW3-09	Upstream and downstream sites connected. High flow. Sampled at bridge abutment due to high water level. Overcast.	10/02/2020	11:22	5.83	0.07	6.56	24.9	77																				
SW3-09	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	27/03/2020	13:14	4.90	0.17	6.29	22.8	15	1	6	0.02	0.68	13	50	50													
SW3-09	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	31/03/2020	10:33	5.37	0.16	6.37	22.5	17	1	3	0.02	0.71	13	50	50													
SW3-09	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/04/2020	11:17	4.27	0.15	5.89	22.9	28																				
SW3-09	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	11/06/2020	10:11	6.07	0.14	6.59	15.3	7	1	7	0.02	0.54	13	50	50													

SW3-10 - Pillar Valley Creek

Wet Event Monitoring

[illegible]

SW3-12 - Black Snake Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-12	On private property - no access to site	2/08/2016																											
SW3-12	On private property - no access to site	8/09/2016																											
SW3-12	Dry	6/10/2016																											
SW3-12	Dry	1/11/2016																											
SW3-12	Dry	8/12/2016																											
SW3-12	Dry	13/01/2017																											
SW3-12	Dry	1/02/2017																											
SW3-12	No access due to flood waters	24/03/2017																											
SW3-12	U/s and d/s sites connected.	24/04/2017		6.59	0.15	6.63	19.8	7																					
SW3-12	Upstream and downstream sites connected. Low flow, low water level. Cattle nearby. Weather fine.	11/05/2017		8.45	0.14	6.66	19.5	10	1	3	0.02	0.12	50	50	50														
SW3-12	Weather fine. Upstream and downstream sites connected by a trickle of water. Water level low.	8/06/2017		7.64	0.17	6.46	15.9	7																					
SW3-12	Upstream and downstream sites connected. Low flow. Low water level. Weather fine.	24/07/2017		8.93	0.15	6.71	13.0	9	1	82	0.03	0.39	13	50	50														
SW3-12	Upstream and downstream sites connected by a trickle. Low flow, low water level. Weather fine.	3/08/2017		7.85	0.16	6.56	13.2	9																					
SW3-12	Weather fine. U/S and D/S connected. No observed flow. Low water level.	4/09/2017		8.32	0.20	6.36	21.7	8	1	4	0.02	0.18	13	50	50														
SW3-12	Upstream and downstream sites connected. Low water level. Weather fine.	5/10/2017		6.43	0.22	6.33	19.3	2																					
SW3-12	Upstream and downstream sites connected. Low water level. Weather fine.	2/11/2017		4.15	0.23	6.38	25.2	7	1	14	0.02	0.39	13	50	110														
SW3-12	No connection between upstream and downstream sites. No visible flow, low water level. Weather fine.	6/12/2017		1.89	0.22	6.43	20.9	2																					
SW3-12	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		5.80	0.22	6.15	30.0	12	1	51	0.02	0.67	13	50	50														
SW3-12	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	13/02/2018		3.53	0.21	6.14	26.4	7																					
SW3-12	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2018		9.40	0.21	6.51	27.8	12	1	12	0.02	0.31	13	50	50														
SW3-12	Unable to access site due to crane lifting girders for bridge.	11/04/2018																											
SW3-12	Unable to access site due to crane lifting girders for bridge.	8/05/2018																											
SW3-12	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	25/06/2018	12:00	3.61	0.20	6.11	10.6	25																					
SW3-12	Dry, not sampled.	24/07/2018	15:22																										
SW3-12	Insufficient water to sample.	10/08/2018	11:31																										

SW3-12 - Black Snake Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-12	Dry - not sampled.	17/09/2018	13:32																									
SW3-12	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	26/10/2018	13:47	3.65	0.18	5.89	26.3	7																				
SW3-12	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	5/11/2018	13:19	4.55	0.21	5.92	27.1	9	1	6	0.02	0.63	13	50	50													
SW3-12	Dry, not sampled.	4/12/2018	12:38																									
SW3-12	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	9/01/2019	12:32	6.45	0.20	6.61	28.5	28	1	87	0.05	0.87	13	50	50													
SW3-12	Dry, not sampled.	7/02/2019	11:16																									
SW3-12	Dry, not sampled.	20/03/2019	11:10																									
SW3-12	Dry, not sampled.	24/04/2019	12:33																									
SW3-12	Dry, not sampled.	2/05/2019																										
SW3-12	Dry, not sampled.	14/06/2019	10:54																									
SW3-12	Dry, not sampled.	4/07/2019	14:58																									
SW3-12	Dry, not sampled	19/08/2019	10:54																									
SW3-12	Insufficient water to sample.	19/09/2019	11:27																									
SW3-12	Dry, not sampled.	3/10/2019	12:03																									
SW3-12	Dry, not sampled.	5/11/2019	9:40																									
SW3-12	Dry, not sampled.	4/12/2019	13:16																									
SW3-12	Dry, not sampled.	8/01/2020	13:09																									
SW3-12	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	18/02/2020	12:54	7.25	0.12	5.61	24.6	18																				
SW3-12	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	4/03/2020	12:44	6.75	0.13	5.60	23.9	15	1	25	0.02	0.38	13	50	50													
SW3-12	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	15/04/2020	10:48	7.85	0.17	5.92	20.2	34																				
SW3-12	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	14/05/2020	10:58	8.89	0.20	6.06	18.1	15	1	9	0.04	0.20	13	50	50													
SW3-12	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	15/06/2020	10:13	7.91	0.18	6.54	16.8	8																				
SW3-12	Dry, not sampled.	5/11/2020																										
SW3-12	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	25/05/2021	12:57	8.06	0.12	5.36	17.7	26	1	8	0.02	0.17	13	50	50	1.920	0.001	0.0010	0.002	0.002	2.690	0.005	0.110	0.0001	0.003	0.001	0.0005	0.006
SW3-12	Upstream and downstream connected. Very low flow. Very low water level. Overcast.	18/11/2021	9:53	7.81	0.17	7.96	22.4	14	1	7	0.02	0.24	13	50	50	0.310	0.002	0.0010	0.001	0.002	2.430	0.005	0.150	0.0001	0.003	0.002	0.0015	0.003
SW3-12	Upstream and downstream sites connected. Medium flow, low water level. Overcast.	5/05/2022	11:57	8.41	0.09	7.18	18.7	43	1	37	0.02	0.23	13	50	50	0.260	0.001	0.0010	0.001	0.002	0.930	0.005	0.041	0.0001	0.003	0.001	0.0005	0.007

SW3-12 - Black Snake Creek

Dry Event Monitoring

[illegible]

SW3-12 - Black Snake Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-11	Weather fine. Upstream and downstream sites connected by a trickle of water. Water level low.	8/06/2017		7.82	0.17	6.13	13.1	10																				
SW3-11	Upstream and downstream sites connected. Low flow. Low water level. Silting of creek just inside of project boundary. Weather fine.	24/07/2017		7.66	0.15	6.43	11.5	10	1	141	0.04	0.59	13	50	50													
SW3-11	Upstream and downstream sites connected by a trickle. Low flow, low water level. Weather fine.	3/08/2017		7.63	0.16	6.41	11.6	11																				
SW3-11	Weather fine. U/S and D/S connected. No observed flow. Low water level.	4/09/2017		7.45	0.20	5.66	18.5	15	3	4	0.02	0.17	13	50	50													
SW3-11	Upstream and downstream sites connected. Low water level. Weather fine.	5/10/2017		4.50	0.22	6.38	17.8	4																				
SW3-11	Upstream and downstream sites connected. Low water level. Weather fine.	2/11/2017		1.83	0.24	6.58	22.7	4	1	18	0.02	0.50	13	50	300													
SW3-11	No connection between upstream and downstream sites. No visible flow, low water level. Weather fine.	6/12/2017		4.04	0.19	6.25	25.2	32																				
SW3-11	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		0.83	0.24	6.16	26.5	21	1	12	0.02	0.65	13	50	50													
SW3-11	Upstream and downstream sites not connected. Very low flow, very low water level. Drizzle.	13/02/2018		0.59	0.22	6.36	25.2	25																				
SW3-11	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2018		0.93	0.22	6.35	26.1	2	1	12	0.02	0.58	13	50	50													
SW3-11	Upstream and downstream sites not connected. No visible flow, very low water level. Weather overcast.	11/04/2018		1.47	0.21	6.44	21.2	11																				
SW3-11	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/05/2018		5.44	0.22	6.19	19.7	14	1	26	0.02	0.75	13	50	50													
SW3-11	Upstream and downstream sites not connected, sample point isolated. No visible flow, very low water level. Evidence of cattle intrusion. Weather fine.	25/06/2018	12:04	3.63	0.22	6.21	11.0	91																				
SW3-11	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/07/2018	15:21	6.19	0.21	6.05	12.8	3	1	7	0.02	0.29	13	50	50													
SW3-11	Insufficient water to sample.	10/08/2018	11:30																									
SW3-11	Dry - not sampled.	17/09/2018	13:30																									
SW3-11	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	26/10/2018	13:43	2.36	0.18	5.86	23.9	13																				
SW3-11	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	5/11/2018	13:13	0.13	0.25	4.90	26.5	45	1	42	0.03	1.22	13	50	50													
SW3-11	Dry, not sampled.	4/12/2018	12:37																									
SW3-11	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	9/01/2019	12:40	1.27	0.24	6.61	25.7	44	1	52	0.10	2.05	13	50	50													
SW3-11	Dry, not sampled.	7/02/2019	11:16																									

SW3-12 - Black Snake Creek

Dry Event Monitoring

[illegible]

SW3-12 - Black Snake Creek

Dry Event Monitoring

[illegible]

SW3-12 - Black Snake Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-12	Private property - no access	4/08/2016																											
SW3-12	Private property - no access	25/08/2016																											
SW3-12	Dry	10/11/2016																											
SW3-12	Dry	6/12/2016																											
SW3-12	Dry	7/01/2017																											
SW3-12	Dry	27/01/2017																											
SW3-12	Dry	28/02/2017																											
SW3-12	Dry	7/03/2017																											
SW3-12	Dry	14/03/2017																											
SW3-12	Weather showers. Connected. High water level, fast flow.	14/06/2017		9.03	0.08	6.44	16.7	7																					
SW3-12	Upstream and downstream sites connected. Water level low, no visible flow. Weather fine.	10/10/2017		5.06	0.21	7.93	22.6	7	1	6	0.03	0.30	13	50	50														
SW3-12	Upstream and downstream sites connected. Slight flow. Low water level.	16/10/2017		6.54	0.21	8.43	20.5	38																					
SW3-12	Upstream and downstream sites connected. Slight flow. Low water level.	6/11/2017		4.00	0.21	6.84	23.7	42																					
SW3-12	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		4.73	0.22	6.38	28.0	47	1	10	0.02	0.31	13	50	50														
SW3-12	Upstream and downstream sites connected. Slight flow, low to medium water level. Overcast.	22/12/2017		7.01	0.17	6.19	24.2	24																					
SW3-12	Upstream and downstream sites connected. Low to medium flow, moderate water level. Weather fine.	4/01/2018		6.00	0.14	6.17	23.3	0																					
SW3-12	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		5.47	0.19	6.18	28.3	30	1	8	0.02	0.46	13	50	50														
SW3-12	Upstream and downstream sites connected. Very low flow, very low water level. Overcast.	21/02/2018		5.86	0.18	6.38	24.4	28	1	15	0.02	0.46	13	50	50														
SW3-12	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	7/03/2018		7.25	0.19	6.54	25.0	26																					
SW3-12	Upstream and downstream sites connected. Low flow, low water level. Overcast.	22/03/2018		4.72	0.17	6.47	24.4	71	1	26	0.02	0.49	13	50	50														
SW3-12	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	20/04/2018		6.81	0.19	6.15	22.5	3	1	10	0.02	0.56	13	50	50														
SW3-12	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	27/04/2018		5.38	0.19	6.88	18.9	19																					
SW3-12	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	8/06/2018	11:49	5.96	0.18	6.34	15.4	23																					
SW3-12	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	28/06/2018	10:33	5.97	0.20	6.31	14.7	13	1	7	0.04	0.35	13	50	50														

SW3-12 - Black Snake Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-12	Dry, not sampled.	27/08/2018	13:27																									
SW3-12	Dry, not sampled.	7/09/2018	13:57																									
SW3-12	Dry, not sampled.	6/10/2018	11:34																									
SW3-12	Dry, not sampled.	12/10/2018	11:59																									
SW3-12	Dry, not sampled.	14/12/2018	12:36																									
SW3-12	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	17/12/2018	14:27	7.02	0.12	6.44	23.1	22	1	10	0.03	0.67	13	50	50													
SW3-12	Dry, not sampled.	23/02/2019	10:07																									
SW3-12	Dry, not sampled.	16/03/2019	11:51																									
SW3-12	Dry, not sampled.	20/04/2019	12:36																									
SW3-12	Dry, not sampled.	16/05/2019	14:13																									
SW3-12	Dry, not sampled.	24/06/2019	12:27																									
SW3-12	Dry, not sampled.	28/06/2019																										
SW3-12	Dry, not sampled.	5/07/2019	12:25																									
SW3-12	Dry, not sampled.	12/10/2019	10:09																									
SW3-12	Dry, not sampled.	24/12/2019	12:31																									
SW3-12	Insufficient water to sample.	16/01/2020	9:58																									
SW3-12	Upstream and downstream sites connected. Very low flow, very low water level. Turbidity exceeded maximum measurement range. Rain.	18/01/2020	11:44	6.83	0.05	6.47	21.6	>1000	1	1792	0.20	1.12	13	50	50													
SW3-12	Upstream and downstream sites connected. High flow, medium water level. Overcast.	7/02/2020	10:30	8.37	0.09	6.68	22.3	45																				
SW3-12	Upstream and downstream sites connected. High flow, medium water level. Overcast.	10/02/2020	11:35	8.13	0.10	6.27	22.7	25																				
SW3-12	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	27/03/2020	13:00	8.29	0.17	6.21	22.2	30	1	10	0.02	0.27	13	50	50													
SW3-12	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	31/03/2020	10:57	9.24	0.15	6.33	21.4	23	1	10	0.02	0.34	13	50	50													
SW3-12	Upstream and downstream sites connected. Medium flow, low water level. Overcast.	4/04/2020	11:09	7.66	0.15	5.69	21.5	40																				
SW3-12	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	11/06/2020	10:22	8.14	0.16	6.38	16.4	26	1	11	0.02	0.21	13	50	50													
SW3-12	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	8/08/2020	13:26	8.57	0.10	5.69	16.0	16																				
SW3-12	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	16/12/2020	12:12	14.75	0.02	6.30	21.5	232	1	170	0.02	0.57	15	5	50	9.480	0.001	0.0010	0.005	0.002	5.030	0.005	0.047	0.0001	0.003	0.001	0.0005	0.013
SW3-12	Upstream and downstream sites connected. Low flow, low water level. Rain.	17/02/2021	11:50	8.14	0.14	6.79	21.4	34																				

SW3-12 - Black Snake Creek

Wet Event Monitoring

[illegible]

SW3-12 - Black Snake Creek

Wet Event Monitoring

[illegible]

SW3-12 - Black Snake Creek

Wet Event Monitoring

[illegible]

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-14	Intermittent watercourse, sample collected in small waterbody	2/08/2016		7.12	0.29	5.66	15.7	6																					
SW3-14	Flowing	8/09/2016		5.28	0.24	5.85	16.3	6	2	17	0.03	0.99	50	50	50														
SW3-14	Not flowing	6/10/2016		3.15	0.24	5.77	15.3	56																					
SW3-14		1/11/2016		2.52	0.27	6.07	20.1	7	1	23	0.03	1.01	50	270	50														
SW3-14		8/12/2016		0.80	0.30	6.40	22.6	61																					
SW3-14	Very low water level, no flow and not connected with SW3-13	13/01/2017		1.80	0.21	6.61	27.5	34	1	29	0.04	1.29	50	370	50														
SW3-14	Very low water level, no flow and not connected with SW3-13	1/02/2017		1.22	0.28	6.86	28.2	4																					
SW3-14	u/s and d/s sites not connected	24/03/2017		8.04	0.14	5.59	24.0	17	1	7	0.03	1.41	50	50	50														
SW3-14	U/s and d/s sites connected.	24/04/2017		5.25	0.18	6.17	20.3	3																					
SW3-14	Dry	11/05/2017																											
SW3-14	Weather fine. Upstream and downstream sites connected by a trickle of water. Water level very low. Slightly stagnant.	8/06/2017		6.02	0.18	6.12	14.7	106																					
SW3-14	Upstream and downstream sites connected. Low water level, low flow. Weather fine.	24/07/2017		7.82	0.15	5.88	11.6	14	1	4	0.02	0.45	13	50	50														
SW3-14	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	3/08/2017		6.61	0.16	5.96	12.6	12																					
SW3-14	Weather fine. U/S and D/S not connected. Water level low. No observed flow.	5/09/2017		6.51	0.20	5.89	14.4	16	1	10	0.02	0.57	13	50	50														
SW3-14	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	5/10/2017		6.63	0.29	6.39	21.3	27																					
SW3-14	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	2/11/2017		5.61	0.31	6.11	20.7	290	1	8	0.02	1.42	13	50	50														
SW3-14	No connection between upstream and downstream sites due to heavy silt. No visible flow, low water level. Weather fine.	6/12/2017		4.07	0.30	6.22	21.2	198																					
SW3-14	Dry	23/01/2018																											
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	13/02/2018		7.58	0.51	6.61	27.6	7																					
SW3-14	Dry - not sampled.	20/03/2018																											
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine. Probe error - no in-situ data.	11/04/2018																											
SW3-14	Dry - not sampled.	8/05/2018																											
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	25/06/2018	11:47	4.90	0.27	5.66	10.6	165																					
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/07/2018	15:05	7.37	0.37	5.30	18.7	11	1	7	0.02	0.20	13	50	50														

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-14	Insufficient water to sample.	10/08/2018	11:43																									
SW3-14	Dry - not sampled.	17/09/2018	13:31																									
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Isolated pool of water, heavy silt. Weather fine.	26/10/2018	13:31	6.61	0.44	6.05	23.6	12																				
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	5/11/2018	12:51	5.66	0.53	6.64	25.1	5	1	3	0.02	1.09	13	50	50													
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	4/12/2018	13:18	7.61	0.70	7.70	23.7	5																				
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	9/01/2019	12:10	5.20	0.45	7.28	26.2	38	1	25	0.03	0.84	13	50	50													
SW3-14	No visible flow, very low water level. Turbidity exceeded maximum measuring range of probe. Weather fine.	7/02/2019	12:15	4.64	0.33	6.76	28.8	800																				
SW3-14	Sampled in an isolated pool of water with no visible flow, very low water level. Weather fine.	20/03/2019	10:58	6.98	0.36	7.14	22.5	136	1	31	0.02	1.02	13	50	50													
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/04/2019	13:39	2.96	0.27	6.79	22.1	74																				
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	2/05/2019	12:58	5.73	0.38	7.38	21.0	29	1	11	0.02	0.42	13	50	50													
SW3-14	No visible flow, very low water level. Weather fine.	14/06/2019	10:42	4.66	0.33	7.01	18.3	19																				
SW3-14	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/07/2019	14:46	7.40	0.28	7.37	18.3	115	1	66	0.03	0.52	13	50	50													
SW3-14	Dry, not sampled	19/08/2019	11:08																									
SW3-14	Insufficient water to sample.	19/09/2019	11:42																									
SW3-14	Dry, not sampled.	3/10/2019	12:20																									
SW3-14	Dry, not sampled.	5/11/2019	10:02																									
SW3-14	Dry, not sampled.	4/12/2019	13:14																									
SW3-14	Dry, not sampled.	8/01/2020	13:04																									
SW3-14	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	18/02/2020	13:07	5.04	0.12	5.65	28.4	9																				
SW3-14	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/03/2020	13:04	5.33	0.13	6.27	26.5	43	1	28	0.03	1.38	13	50	50													
SW3-14	Upstream and downstream sites connected. Low flow, very low water level. Weather fine.	15/04/2020	10:17	7.35	0.07	6.37	20.8	105																				
SW3-14	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	14/05/2020	11:19	7.53	0.15	6.48	18.2	8	1	8	0.04	0.46	13	50	50													
SW3-14	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	15/06/2020	10:23	6.63	0.17	6.60	17.0	9																				
SW3-14	Insufficient water to sample.	5/11/2020																										

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Dry Event Monitoring

[illegible]

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-13	Very low, no flow and not connected with SW3-14	1/02/2017		2.54	0.39	6.92	32.4	206																				
SW3-13	Slight visible flow but no connection between u/s and d/s sites.	24/03/2017		7.97	0.14	5.48	23.7	7	1	4	0.03	1.50	50	50	50													
SW3-13	U/s and d/s sites connected.	24/04/2017		2.33	0.16	5.84	18.7	2																				
SW3-13	Dry	11/05/2017																										
SW3-13	Weather fine. Upstream and downstream sites connected by a trickle of water. Water level very low. Slightly stagnant	8/06/2017		0.66	0.14	5.62	14.3	6																				
SW3-13	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	24/07/2017		5.37	0.14	5.89	11.0	4	1	33	0.03	0.67	13	50	50													
SW3-13	Upstream and downstream sites connected. Low flow, low - moderate water level. Weather fine.	3/08/2017		4.08	0.15	5.76	11.2	4																				
SW3-13	Weather fine. U/S and D/S not connected. Water level low. No observed flow. Sample taken in isolated pool.	5/09/2017		3.94	0.20	5.48	14.4	3	1	8	0.02	0.35	13	50	50													
SW3-13	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	5/10/2017		5.20	0.24	5.71	19.0	10																				
SW3-13	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	2/11/2017		3.63	0.25	6.03	22.4	6	1	22	0.02	0.84	13	50	50													
SW3-13	No connection between upstream and downstream sites due to heavy silt. No visible flow, low water level. Weather fine.	6/12/2017		7.70	0.28	6.06	22.6	4																				
SW3-13	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		1.55	0.26	5.94	26.7	12	1	14	0.02	0.96	13	50	50													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	13/02/2018		0.81	0.27	6.13	25.1	21																				
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2018		3.28	0.23	5.98	24.8	32	1	29	0.02	0.55	13	50	50													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	11/04/2018		3.35	0.22	6.22	22.3	70																				
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/05/2018		3.88	0.28	5.23	18.8	5	1	6	0.02	0.94	13	50	50													
SW3-13	Waterway dry. Weather fine.	25/06/2018	11:06																									
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/07/2018	14:57	5.84	0.29	4.87	20.4	3	1	12	0.02	0.69	13	50	50													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	10/08/2018	11:40	8.15	0.34	5.96	9.8	5																				
SW3-13	Isolated pool of water with no visible flow and very low water level. Weather fine.	17/09/2018	13:20	6.58	0.29	6.44	18.8	26	1	17	0.04	0.35	13	50	50													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	26/10/2018	13:28	3.50	0.31	5.39	26.0	24																				

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	5/11/2018	12:42	4.59	0.36	6.07	27.2	24	1	19	0.03	1.22	13	50	50													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	4/12/2018	13:13	7.58	0.62	7.27	24.5	81																				
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	9/01/2019	12:18	0.98	0.37	6.74	25.6	28	1	42	0.05	1.38	13	50	50													
SW3-13	Dry, not sampled.	7/02/2019	12:18																									
SW3-13	Insufficient water to sample.	20/03/2019	10:56																									
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	24/04/2019	13:35	2.54	0.20	7.20	21.5	154																				
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	2/05/2019	12:50	2.25	0.18	7.02	20.9	19	1	15	0.03	0.65	13	50	50													
SW3-13	Dry, not sampled.	14/06/2019	10:38																									
SW3-13	Insufficient water to monitor.	4/07/2019																										
SW3-13	Dry, not sampled	19/08/2019	11:07																									
SW3-13	Dry, not sampled.	19/09/2019	11:43																									
SW3-13	Dry, not sampled.	3/10/2019	12:20																									
SW3-13	Dry, not sampled.	5/11/2019	10:01																									
SW3-13	Dry, not sampled.	4/12/2019	13:15																									
SW3-13	Dry, not sampled.	8/01/2020	13:03																									
SW3-13	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	18/02/2020	13:05	6.06	0.11	5.97	27.9	8																				
SW3-13	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/03/2020	13:09	4.06	0.12	6.28	25.8	17	1	15	0.03	1.43	13	50	50													
SW3-13	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	15/04/2020	10:21	9.77	0.12	5.97	18.0	13																				
SW3-13	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	14/05/2020	11:22	3.83	0.13	6.03	17.8	21	1	27	0.05	0.55	13	50	50													
SW3-13	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	15/06/2020	10:25	5.60	0.16	6.25	15.8	8																				
SW3-13	Dry, not sampled.	5/11/2020																										
SW3-13	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	25/05/2021	13:23	6.15	0.09	5.25	18.4	21	1	3	0.02	0.54	13	50	50	2.180	0.001	0.0010	0.002	0.002	2.170	0.005	0.024	0.0001	0.003	0.001	0.0005	0.008
SW3-13	Upstream and downstream connected. Very low flow. Low water level. Overcast.	17/11/2021	11:45	7.79	0.16	7.54	25.2	23	1	9	0.02	0.51	13	50	50	5.080	0.002	0.0010	0.003	0.002	4.860	0.005	0.120	0.0001	0.003	0.002	0.0015	0.006
SW3-13	Upstream and downstream sites connected. Medium flow, low water level. Overcast.	5/05/2022	12:17	7.50	0.07	7.09	18.8	22	1	13	0.02	0.60	13	50	50	0.270	0.001	0.0010	0.001	0.002	0.590	0.005	0.046	0.0001	0.003	0.001	0.0005	0.005

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-14	Very turbid water, fast flowing.	4/08/2016		8.53	0.13	5.82	13.9	133																					
SW3-14	Very low flow, surface scum present.	25/08/2016		9.03	0.17	4.70	15.3	23	2	6	0.03	0.92	50	50	50														
SW3-14		10/11/2016		1.75	0.29	7.16	25.1	6	1	29	0.02	1.19	50	210	50														
SW3-14	Accurate turbidity reading could not be obtained	6/12/2016		8.62	0.27	7.18	24.4																						
SW3-14	Water level very low, no flow.	7/01/2017		1.37	0.17	5.99	23.4	455	1	61	0.05	1.45	100	470	50														
SW3-14	Very low water level, no flow and not connected with SW3-13	27/01/2017		5.89	0.29	6.78	24.1	20																					
SW3-14	Very low water level, no flow and not connected with SW3-13.	28/02/2017		3.83	0.22	6.11	21.1	452																					
SW3-14	No visible flow. No connection between upstream and downstream sites	7/03/2017		1.07	0.19	6.16	23.2	130	3	66	0.06	1.20	50	190	50														
SW3-14	Very low visible flow. No connection between upstream and downstream sites.	14/03/2017		8.46	0.20	6.32	21.1	66	1	66	0.05	1.10	50	170	50														
SW3-14	Weather showers. Connected. Strong flow	14/06/2017		8.65	0.09	6.08	16.8	14																					
SW3-14	Upstream and downstream sites not connected. Water level very low. Weather fine.	10/10/2017		3.95	0.25	7.86	20.6	185	1	31	0.03	0.71	13	50	50														
SW3-14	Upstream and downstream sites connected. Slight flow. Low water level. Rain.	16/10/2017		5.92	0.22	8.28	19.7	678																					
SW3-14	Upstream and downstream sites connected. Slight flow. Low water level.	6/11/2017		6.19	0.29	5.95	21.5	460																					
SW3-14	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	2/12/2017		3.38	0.28	6.40	23.7	418	1	188	0.02	1.01	13	50	50														
SW3-14	No access	22/12/2017																											
SW3-14	No access	4/01/2018																											
SW3-14	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		6.51	0.48	6.01	26.2	182	1	172	0.02	5.51	13	50	50														
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	21/02/2018		5.44	0.45	6.02	25.7	183	1	144	0.02	4.34	13	50	50														
SW3-14	Unable to sample due to access issues - overhead crane working, unsafe.	7/03/2018																											
SW3-14	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	22/03/2018		3.98	0.28	6.13	24.9	699	1	195	0.02	1.96	13	50	50														
SW3-14	Upstream and downstream sites not connected. No visible flow, isolated pool, very low water level. Weather fine.	20/04/2018		4.75	0.36	6.09	24.0	745	1	294	0.02	2.21	13	50	50														
SW3-14	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	27/04/2018		6.18	0.38	6.55	21.1	498																					
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/06/2018	12:17	5.84	0.48	5.67	16.5	55																					

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-14	Upstream and downstream sites not connected, no visible flow. Sampled within isolated, very shallow pool. Unable to obtain turbidity reading. Weather fine.	28/06/2018	11:19	4.96	0.22	6.08	15.2		1	29	0.02	0.78	13	50	50													
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	13:02	5.46	0.48	6.61	16.6	86	1	40	0.02	4.22	13	50	50													
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	7/09/2018	11:45	5.39	0.55	6.71	19.4	130																				
SW3-14	Dry, not sampled.	6/10/2018	11:28																									
SW3-14	Site access closed due to wet weather.	12/10/2018	12:00																									
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	14/12/2018	12:11	3.17	0.42	7.16	25.6	232																				
SW3-14	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	17/12/2018	13:33	5.92	0.21	6.73	26.0	94	1	53	0.04	1.31	13	50	50													
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Turbidity exceeded maximum measuring range of probe. Weather fine.	22/02/2019	15:06	5.17	0.32	6.99	27.1	800	1	672	0.29	2.90	13	50	50													
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Rain.	16/03/2019	11:19	6.44	0.36	6.46	22.1	114																				
SW3-14	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	20/04/2019	14:22	4.02	0.22	6.70	23.2	92	1	52	0.03	0.76	13	50	50													
SW3-14	Upstream and downstream sites not connected. Low flow, low water level. Drizzle.	16/05/2019	15:02	6.87	0.25	8.60	18.3	276																				
SW3-14	Low flow, low water level. Rain.	24/06/2019	12:45	6.81	0.39	7.38	13.0	168	1	72	0.07	1.15	13	50	50													
SW3-14	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	28/06/2019	11:38	5.63	0.25	6.41	17.6	192																				
SW3-14	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/07/2019	12:07	5.64	0.27	6.73	17.1	162																				
SW3-14	Low flow, low water level. Drizzle.	12/10/2019	9:48	4.14	0.26	6.90	16.4	673	1	282	0.26	2.99	13	50	50													
SW3-14	Dry, not sampled.	24/12/2019	12:39																									
SW3-14	Insufficient water to sample.	16/01/2020	10:06																									
SW3-14	Upstream and downstream sites connected. High flow, high water level. Rain.	18/01/2020	11:16	7.52	0.09	5.63	21.2	228	1	226	0.09	0.95	13	50	50													
SW3-14	Upstream and downstream sites connected. High flow, medium water level. Overcast.	7/02/2020	10:43	7.75	0.13	6.29	23.0	26																				
SW3-14	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	10/02/2020	11:49	7.59	0.10	6.47	25.0	14																				
SW3-14	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	27/03/2020	12:37	8.49	0.14	6.29	23.0	24	1	8	0.02	1.05	13	50	50													
SW3-14	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	31/03/2020	11:17	7.84	0.13	6.29	22.2	29	1	16	0.02	1.03	13	50	50													

Wet Event Monitoring

Upstream Monitoring

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-13	Water level low and no flow.	28/02/2017		5.06	0.15	5.64	21.8	800																				
SW3-13	No flow. No connection between upstream and downstream sites.	7/03/2017		1.42	0.32	5.70	24.1	46	3	29	0.04	1.10	50	160	50													
SW3-13	Very low visible flow. No connection between upstream and downstream sites.	14/03/2017		2.19	0.32	5.89	21.4	34	1	26	0.03	0.80	50	120	50													
SW3-13	Weather showers. Connected. Strong flow	14/06/2017		7.46	0.09	5.95	16.8	10																				
SW3-13	Upstream and downstream sites not connected. Water level very low. Weather fine.	10/10/2017		1.09	0.31	7.89	21.2	30	1	11	0.04	0.51	13	50	50													
SW3-13	Upstream and downstream sites connected. Slight flow. Low water level. Rain.	16/10/2017		5.02	0.20	8.42	19.5	239																				
SW3-13	Upstream and downstream sites connected. Slight flow. Low water level.	6/11/2017		1.80	0.25	6.24	22.1	8																				
SW3-13	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		1.76	0.29	6.19	24.4	4	1	18	0.02	0.48	13	50	50													
SW3-13	No access	22/12/2017																										
SW3-13	No access	4/01/2018																										
SW3-13	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		3.27	0.25	6.03	23.5	12	1	44	0.09	1.54	13	50	50													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	21/02/2018		4.45	0.25	6.17	23.3	54	1	48	0.10	1.52	13	50	50													
SW3-13	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	7/03/2018		2.95	0.23	6.23	23.6	118																				
SW3-13	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	22/03/2018		3.31	0.22	6.33	24.2	69	1	49	0.02	0.61	13	50	50													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/04/2018		3.46	0.23	5.61	21.9	45	1	15	0.02	0.46	13	50	50													
SW3-13	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	27/04/2018		3.25	0.25	6.17	19.2	34																				
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/06/2018	12:14	5.70	0.19	5.78	14.6	186																				
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	28/06/2018	11:22	5.11	0.23	5.43	14.1	52	1	27	0.02	0.50	13	50	50													
SW3-13	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	27/08/2018	12:55	6.38	0.22	6.77	14.3	174	1	94	0.03	3.02	13	50	50													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	7/09/2018	11:42	5.79	0.27	5.98	17.5	104																				
SW3-13	Sampled in an isolated pool with no visible flow and very low water level. Weather fine.	6/10/2018	11:33	6.49	0.49	5.05	20.6	21	1	10	0.02	7.66	13	50	50													
SW3-13	Site access closed due to wet weather.	12/10/2018	12:03																									
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	14/12/2018	12:16	4.03	0.36	7.59	26.6	799																				

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW3-13	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	17/12/2018	13:40	3.78	0.22	6.16	25.3	43	1	15	0.03	1.17	13	50	50													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Turbidity exceeded maximum measuring range of probe. Weather fine.	22/02/2019	15:13	3.11	0.22	6.22	24.0	800	1	554	0.36	2.34	13	50	50													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Rain.	16/03/2019	11:15	2.33	0.30	6.45	21.8	118																				
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	20/04/2019	14:13	2.59	0.16	7.93	23.0	317	1	166	0.08	0.90	13	50	50													
SW3-13	Upstream and downstream sites not connected. No visible flow, very low water level. Drizzle.	16/05/2019	14:58	6.03	0.17	7.96	18.2	158																				
SW3-13	Dry, not sampled.	24/06/2019	12:39																									
SW3-13	Insufficient water to sample.	28/06/2019																										
SW3-13	Insufficient water to sample.	5/07/2019	12:04																									
SW3-13	Dry, not sampled.	12/10/2019	10:43																									
SW3-13	Dry, not sampled.	24/12/2019	12:40																									
SW3-13	Dry, not sampled.	16/01/2020	10:02																									
SW3-13	Upstream and downstream sites connected. High flow, high water level. Rain.	18/01/2020	11:11	7.79	0.10	5.65	21.2	93	1	65	0.05	0.81	13	50	50													
SW3-13	Upstream and downstream sites connected. High flow, medium water level. Overcast.	7/02/2020	10:41	7.86	0.13	6.34	23.0	26																				
SW3-13	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	10/02/2020	11:47	7.52	0.12	6.39	24.6	13																				
SW3-13	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	27/03/2020	12:42	8.26	0.14	6.08	22.7	22	1	7	0.02	1.13	13	50	50													
SW3-13	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	31/03/2020	11:22	7.64	0.12	6.06	21.6	26	1	7	0.02	1.08	13	50	50													
SW3-13	Upstream and downstream sites connected. Medium flow, low water level. Overcast.	4/04/2020	10:56	6.93	0.13	5.68	22.0	40																				
SW3-13	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	10:45	6.15	0.14	6.17	16.6	16	1	10	0.03	0.94	13	50	50													
SW3-13	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	8/08/2020	13:41	8.85	0.10	5.51	15.0	26																				
SW3-13	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	16/12/2020	12:49	13.66	0.02	5.92	22.5	183	1	118	0.02	0.62	15	5	50	5.930	0.001	0.0010	0.002	0.002	2.630	0.005	0.039	0.0001	0.003	0.001	0.0005	0.005
SW3-13	Upstream and downstream sites connected. Medium flow, low water level. Rain.	17/02/2021	12:13	6.39	0.11	6.33	21.9	24																				
SW3-13	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	3/05/2021	14:05	8.49	0.08	5.87	19.9	29	1	9	0.02	0.72	13	50	50	5.190	0.001	0.0010	0.002	0.002	2.990	0.005	0.037	0.0001	0.003	0.001	0.0005	0.004

SW3-14 - Unnamed Creek tributary of Ellis Swamp

Wet Event Monitoring

[illegible]

Dry Event Monitoring

SW3-16 - Chaffin Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/08/2018	13:47	4.28	0.25	6.49	13.3	0																				
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/09/2018	13:09	4.78	0.26	6.84	19.1	15	1	8	0.02	0.50	13	50	50													
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	26/10/2018	13:14	3.54	0.17	5.80	28.2	15																				
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/11/2018	12:28	5.89	0.18	6.21	27.9	9	1	5	0.04	1.09	13	50	50													
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/12/2018	13:29	3.66	0.22	7.86	25.5	5																				
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	9/01/2019	11:48	3.12	0.20	6.63	28.5	16	1	10	0.07	1.55	13	50	50													
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	7/02/2019	11:44	2.72	0.20	7.11	27.8	8																				
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/03/2019	10:34	5.12	0.41	7.12	24.0	19	1	6	0.03	2.90	13	50	50													
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	24/04/2019	13:25	3.84	0.44	7.23	20.8	77																				
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	2/05/2019	12:39	4.24	0.43	6.87	21.2	10	1	9	0.02	1.37	13	50	50													
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	14/06/2019	10:26	7.31	0.45	7.28	15.1	7																				
SW3-16	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	4/07/2019	14:30	6.62	0.81	7.16	17.3	80	1	15	0.02	2.04	13	50	50													
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	19/08/2019	10:29	9.59	0.48	7.32	15.5	7																				
SW3-16	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	19/09/2019	11:58	7.42	0.34	7.34	18.8	6	1	7	0.04	0.56	13	50	50													
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/10/2019	12:36	8.93	0.45	7.66	19.7	12																				
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/11/2019	10:24	7.19	0.44	7.64	23.4	16	1	5	0.02	0.51	50	50	50													
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/12/2019	12:07	7.43	0.61	7.36	26.5	5																				
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/01/2020	12:55	5.10	0.58	7.97	31.1	5	1	6	0.02	0.62	13	13	50													
SW3-16	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	18/02/2020	13:17	3.30	0.13	5.74	28.5	16																				
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	4/03/2020	13:34	3.75	0.12	5.92	27.1	223	1	19	0.04	0.86	13	50	50													

SW3-16 - Chaffin Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	15/04/2020	10:08	9.09	0.13	5.77	19.4	18																				
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	14/05/2020	11:34	3.05	0.17	6.10	17.6	9	1	2	0.02	0.52	13	50	50													
SW3-16	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	15/06/2020	10:33	4.41	0.17	6.48	15.8	10																				
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/11/2020	12:19	4.69	0.23	7.03	23.0	9	1	2	0.02	0.46	13	50	50	0.180	0.001	0.0010	0.002	0.002	1.120	0.005	0.090	0.0001	0.013	0.001	0.0005	0.004
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	25/05/2021	13:36	4.41	0.11	5.33	16.8	24	1	7	0.02	0.60	13	50	50	3.220	0.001	0.0010	0.002	0.002	3.320	0.005	0.071	0.0001	0.003	0.001	0.0005	0.006
SW3-16	Upstream and downstream connected. Very low flow. Medium water level. Overcast.	17/11/2021	12:00	4.70	0.23	7.63	23.1	2	1	2	0.02	0.61	13	50	50	0.830	0.002	0.0010	0.001	0.002	1.850	0.005	0.080	0.0001	0.003	0.002	0.0015	0.003
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	5/05/2022	12:33	4.17	0.10	6.99	19.2	42	1	20	0.03	0.53	13	50	50	0.290	0.001	0.0010	0.001	0.002	0.530	0.005	0.039	0.0001	0.003	0.001	0.0005	0.004
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.31	6.89		19	3	13	0.05	1.19	43	50	50	1.846	0.001	0.0010	0.002	0.002	2.406	0.005	0.107	0.0001	0.003	0.001	0.0009	0.036
P20				3.48	0.16	6.12																						
St Dev					0.13	0.55																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW08		27/02/2013		5.48	0.19	6.44	23.7	24	3	12	0.03	0.80																
Section3 SW08		21/03/2013		4.35	0.14	6.34	23.8	14	3	7	0.06	0.70																
Section3 SW08		18/04/2013		6.85	0.10	6.52	22.9	21	3	5	0.05	0.80																
Section3 SW08		22/05/2013		5.63	0.24	6.72	14.8	10	3	6	0.08	0.60																
Section3 SW08		27/06/2013		7.94	0.15	6.22	15.8	19	3	6	0.03	0.62																
Section3 SW08		24/07/2013		7.87	0.23	5.94	15.0	18	3	6	0.03	0.44																
Section3 SW08		21/08/2013		7.17	0.21	6.82	14.8	9	3	5	0.04	1.50																
Section3 SW08		25/09/2013		6.43	0.23	6.31	23.2	5	3	6	0.01	0.41																
Section3 SW08		23/10/2013		6.51	0.34	6.74	28.5	4	3	3	0.02	0.72																
Section3 SW08		28/11/2013		6.23	0.17	5.51	30.3	19	3	10	0.02	0.83																
Section3 SW08		18/12/2013		3.04	0.17	5.32	25.5	7	5	5	0.25	0.30																
Upstream Monitoring																												

SW3-16 - Chaffin Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-15	Dry	2/08/2016																										
SW3-15	Intermittent watercourse	8/09/2016		5.37	0.22	6.11	16.1	0	1	7	0.03	0.62	50	50	50													
SW3-15	Flowing	6/10/2016		2.70	0.26	6.19	17.5	5																				
SW3-15		1/11/2016		4.33	0.28	6.55	22.4	9	1	3	0.02	0.59	50	140	50													
SW3-15		8/12/2016		3.48	0.27	6.30	24.9	88																				
SW3-15	Water level low, slight flow	13/01/2017		3.70	0.26	6.75	29.3	8	1	2	0.02	1.21	50	200	50													
SW3-15	Water level low, not flow	1/02/2017		3.64	0.31	6.67	30.6	0																				
SW3-15	U/s and d/s sites connected	24/03/2017		7.97	0.13	5.85	24.8	4	1	3	0.04	0.94	50	50	50													
SW3-15	U/s and d/s sites connected.	24/04/2017		0.92	0.15	6.22	19.8	1																				
SW3-15	Upstream and downstream sites connected. Low flow, low water level. Full sun, dense algae. Weather fine	11/05/2017		7.63	0.16	6.62	21.6	2	1	2	0.02	0.46	50	50	50													
SW3-15	Weather fine. Connected. Water level low	8/06/2017		5.06	0.15	6.12	14.8	4																				
SW3-15	Upstream and downstream sites connected. Low water level, low flow. Weather fine.	24/07/2017		6.20	0.16	6.18	14.6	7	1	3	0.02	0.54	13	50	50													
SW3-15	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	3/08/2017		5.10	0.17	6.28	13.9	4																				
SW3-15	Weather fine. U/S and D/S connected. Water level very low. No observed flow.	5/09/2017		8.11	0.20	6.06	18.5	1	1	3	0.02	0.46	13	50	50													
SW3-15	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	5/10/2017		5.65	0.22	6.63	22.7	5																				
SW3-15	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	2/11/2017		4.52	0.23	6.72	25.0	10	1	11	0.02	0.70	13	50	50													
SW3-15	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	6/12/2017		4.79	0.24	6.47	26.6	14																				
SW3-15	Upstream and downstream connected. Low flow, medium water level. Weather fine.	23/01/2018		3.90	0.19	6.43	30.0	3	1	24	0.03	1.21	13	50	50													
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	13/02/2018		2.62	0.16	6.43	27.5	23																				
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	20/03/2018		3.33	0.22	6.41	25.5	0	1	9	0.03	0.80	13	50	50													
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	11/04/2018		2.84	0.21	6.25	23.8	8																				
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	8/05/2018		2.43	0.23	6.20	20.2	9	1	9	0.03	0.83	13	50	50													
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	25/06/2018	11:38	5.66	0.25	6.30	11.4	14																				
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	16/07/2018	15:36	5.03	0.23	6.65	12.9	13	1	23	0.07	2.02	13	50	50													
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/08/2018	13:42	5.62	0.25	6.63	15.4	2																				

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/09/2018	13:00	5.14	0.26	6.70	19.1	11	1	14	0.03	0.68	13	50	50													
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	26/10/2018	13:10	2.91	0.17	5.83	28.5	13																				
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/11/2018	12:21	6.41	0.19	6.14	26.4	12	1	11	0.05	1.34	13	50	50													
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/12/2018	13:32	4.36	0.22	7.52	26.6	9																				
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	9/01/2019	11:56	5.54	0.19	6.78	27.6	44	1	54	0.06	1.59	13	50	50													
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	7/02/2019	11:39	1.79	0.21	7.11	26.2	12																				
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/03/2019	10:30	3.32	0.39	6.94	24.1	29	1	7	0.02	2.56	13	50	50													
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	24/04/2019	13:21	4.43	0.45	7.26	22.3	75																				
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	2/05/2019	12:35	3.87	0.41	6.81	20.7	38	1	136	0.21	2.19	13	50	50													
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	14/06/2019	10:20	5.97	0.45	6.89	15.7	7																				
SW3-15	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/07/2019	14:22	5.99	0.43	6.53	16.3	80	1	20	0.03	1.15	13	50	50													
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	19/08/2019	10:21	9.47	0.45	7.32	14.9	5																				
SW3-15	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	19/09/2019	11:54	8.33	0.34	7.36	19.0	6	1	12	0.03	0.76	13	50	50													
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/10/2019	12:30	8.94	0.44	7.69	21.6	9																				
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/11/2019	10:19	5.69	0.51	7.27	22.6	9	1	9	0.02	0.65	50	50	50													
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/12/2019	12:11	7.49	0.54	7.29	26.0	7																				
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/01/2020	12:47	6.68	0.78	7.87	30.5	6	1	8	0.02	0.71	13	13	50													
SW3-15	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	18/02/2020	13:14	3.07	0.11	5.84	29.5	13																				
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	4/03/2020	13:27	2.83	0.11	6.06	26.1	18	1	20	0.04	0.85	13	50	50													
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	15/04/2020	10:06	4.11	0.13	5.80	19.5	18																				
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	14/05/2020	11:37	3.92	0.17	6.00	17.6	15	1	10	0.06	0.70	13	50	50													
SW3-15	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	15/06/2020	10:35	5.02	0.16	6.49	16.0	10																				

SW3-16 - Chaffin Creek

Dry Event Monitoring

[illegible]

SW3-16 - Chaffin Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-16	Fast flowing water	4/08/2016		8.43	0.09	5.54	13.7	71																					
SW3-16	Moderate flow - appears turbid	25/08/2016		4.69	0.20	5.78	14.6	29	2	9	0.03	0.61	50	50	50														
SW3-16	Accurate turbidity reading could not be obtained	10/11/2016		4.74	0.28	7.00	28.4		1	3	0.02	0.54	50	50	50														
SW3-16		6/12/2016		8.30	0.27	7.39	26.5	72																					
SW3-16	Slight flow, water level low.	7/01/2017		2.35	0.26	6.05	26.0	16	1	4	0.02	0.50	50	50	50														
SW3-16	Water level low, no flow	27/01/2017		2.77	0.30	6.54	27.6	0																					
SW3-16	Water level low, no flow	28/02/2017		3.66	0.32	6.60	23.1	35																					
SW3-16		7/03/2017		3.10	0.31	6.72	27.1	7	1	7	0.02	0.50	50	50	50														
SW3-16		14/03/2017		8.24	0.30	6.55	22.9	3	1	19	0.03	0.70	50	50	50														
SW3-16	Weather showers. Connected. Water level high. Slight flow.	14/06/2017		4.79	0.07	6.05	16.7	19																					
SW3-16	Upstream and downstream sites connected. Water level slightly lower than usual. Weather fine.	10/10/2017		5.34	0.22	8.04	25.3	8	1	3	0.03	0.49	13	50	50														
SW3-16	Upstream and downstream sites connected. No visible flow. High water level. Rain.	16/10/2017		4.75	0.21	8.32	20.8	352																					
SW3-16	Upstream and downstream sites connected. No visible flow. High water level.	6/11/2017		3.92	0.22	6.59	24.0	29																					
SW3-16	Upstream and downstream sites connected. No visible flow. High water level. Weather, fine.	2/12/2017		3.66	0.25	6.54	24.9	14	1	11	0.02	0.47	13	50	50														
SW3-16	Upstream and downstream sites connected, no visible flow, medium water level. Overcast.	22/12/2017		4.90	0.26	6.32	26.3	38																					
SW3-16	Upstream and downstream sites connected. Low flow, moderate water level. Weather fine.	4/01/2018		2.25	0.16	5.74	24.2	25																					
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/02/2018		2.80	0.19	6.01	24.6	5	1	9	0.02	0.85	13	50	50														
SW3-16	Upstream and downstream sites connected. Low flow, low water level. Overcast.	21/02/2018		3.40	0.20	6.49	25.4	42	1	16	0.03	1.06	13	50	50														
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	7/03/2018		3.05	0.22	6.75	24.8	54																					
SW3-16	Upstream and downstream sites connected. Low flow, low water level. Overcast.	22/03/2018		4.60	0.21	6.58	24.8	18	1	12	0.02	1.75	13	50	50														
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	20/04/2018		3.39	0.22	6.11	23.1	23	1	19	0.02	1.15	13	50	50														
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	27/04/2018		1.54	0.22	6.62	20.2	15																					
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	8/06/2018	11:22	5.14	0.23	6.46	14.6	23																					
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	28/06/2018	11:59	5.01	0.23	6.09	14.6	27	1	4	0.02	0.69	13	50	50														

SW3-16 - Chaffin Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	27/08/2018	12:25	5.75	0.25	6.97	14.6	16	1	8	0.02	0.63	13	50	50													
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	7/09/2018	11:31	5.98	0.26	6.57	16.9	23																				
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	6/10/2018	11:09	4.42	0.27	6.31	20.2	24	1	9	0.02	0.56	13	50	50													
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Rain.	12/10/2018	12:23	4.93	0.27	6.70	19.5	52																				
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	14/12/2018	11:52	3.55	0.23	7.38	26.5	6																				
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	17/12/2018	13:19	4.62	0.22	7.07	26.0	102	1	52	0.04	0.87	13	50	50													
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	22/02/2019	14:47	3.97	0.20	6.92	26.1	23	1	23	0.03	1.16	13	50	50													
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Rain.	16/03/2019	10:43	4.80	0.27	6.92	24.0	20																				
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	20/04/2019	14:51	4.83	0.38	7.21	21.0	17	1	16	0.03	1.54	13	50	50													
SW3-16	Upstream and downstream sites connected. Very low flow, low water level. Drizzle.	16/05/2019	14:44	5.59	0.43	6.24	17.0	49																				
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	24/06/2019	13:23	6.51	0.44	6.95	12.7	17	1	3	0.02	0.53	13	50	50													
SW3-16	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	28/06/2019	11:53	6.59	0.50	6.87	16.1	189																				
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	5/07/2019	11:46	6.69	0.64	8.65	16.1	106																				
SW3-16	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	12/10/2019	10:02	5.69	0.45	6.94	18.5	7	1	13	0.04	0.71	13	50	50													
SW3-16	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	24/12/2019	12:53	5.07	0.53	6.84	26.8	390																				
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	16/01/2020	10:23	5.46	0.63	8.00	26.8	58	1	28	0.04	0.88	13	50	50													
SW3-16	Upstream and downstream sites connected. High flow, high water level. Water appeared more turbid mid-stream, however sampled closer to bank due to safety concerns. Rain.	18/01/2020	10:50	6.15	0.09	6.14	21.6	330	1	172	0.12	2.14	13	50	50													
SW3-16	Upstream and downstream sites connected. Medium flow, very high water level. Drizzle.	7/02/2020	11:03	5.49	0.08	6.37	22.7	88																				
SW3-16	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	10/02/2020	12:04	4.74	0.08	6.21	23.7	37																				
SW3-16	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	27/03/2020	12:21	2.92	0.16	6.05	22.6	39	1	32	0.05	1.04	13	50	50													
SW3-16	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	31/03/2020	11:53	3.82	0.11	5.88	21.8	243	1	74	0.04	0.89	13	50	50													

Wet Event Monitoring

[illegible][illegible][illegible]

Wet Event Monitoring

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	14/12/2018	11:58	2.47	0.26	6.96	25.4	26																				
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	17/12/2018	13:11	3.86	0.21	7.07	25.1	36	1	18	0.03	1.01	13	50	50													
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	22/02/2019	14:43	3.35	0.21	6.78	26.0	16	1	12	0.03	1.38	13	50	50													
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Rain.	16/03/2019	10:37	3.80	0.25	6.92	23.2	24																				
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	20/04/2019	14:42	6.62	0.39	7.28	22.9	35	1	32	0.05	3.10	13	50	50													
SW3-15	Upstream and downstream sites connected. Very low flow, low water level. Drizzle.	16/05/2019	14:40	5.97	0.39	6.00	16.8	10																				
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	24/06/2019	13:15	4.77	0.42	6.90	12.8	51	1	6	0.02	0.54	13	50	50													
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	28/06/2019	11:48	6.82	0.45	6.82	17.2	127																				
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Drizzle.	5/07/2019	11:40	6.05	0.55	6.72	16.8	113																				
SW3-15	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	12/10/2019	10:08	3.50	0.44	6.75	18.1	6	1	9	0.02	0.69	13	50	50													
SW3-15	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	24/12/2019	12:49	3.75	0.55	6.82	26.3	319																				
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	16/01/2020	10:29	4.34	0.58	7.44	26.6	6	1	6	0.02	0.63	13	50	50													
SW3-15	Upstream and downstream sites connected. High flow, high water level. Rain.	18/01/2020	10:41	6.58	0.07	5.79	21.5	962	1	1168	0.38	2.00	13	50	50													
SW3-15	Upstream and downstream sites connected. Medium flow, very high water level. Overcast.	7/02/2020	10:59	5.92	0.08	6.11	23.2	178																				
SW3-15	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	10/02/2020	12:00	3.45	0.09	6.05	24.7	98																				
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	27/03/2020	12:15	2.94	0.16	6.04	22.7	38	1	13	0.04	0.99	13	50	50													
SW3-15	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	31/03/2020	11:48	4.08	0.11	6.01	21.7	241	1	60	0.04	0.89	13	50	50													
SW3-15	Upstream and downstream sites connected. Low flow, high water level. Overcast.	4/04/2020	10:43	4.15	0.11	5.50	21.9	158																				
SW3-15	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	11:02	4.36	0.18	6.43	16.8	20	1	10	0.04	0.78	13	50	50													
SW3-15	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	8/08/2020	13:52	5.47	0.08	5.55	14.3	22																				
SW3-15	Upstream and downstream sites connected. High flow, very high water level. Rain.	16/12/2020	13:05	8.98	0.03	6.17	22.2	45	1	10	0.02	0.55	15	5	50	4.640	0.001	0.0010	0.002	0.002	1.950	0.005	0.035	0.0001	0.003	0.001	0.0005	0.010
SW3-15	Upstream and downstream sites connected. Low flow, medium water level. Rain.	17/02/2021	12:28	4.49	0.16	6.66	24.2	8																				

SW3-16 - Chaffin Creek

Wet Event Monitoring

[illegible]

SW3-18 - Unnamed tributary of Chaffin Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-18	Private property - no access	2/08/2016																											
SW3-18	Private property - no access	8/09/2016																											
SW3-18	Private property - no access	6/10/2016																											
SW3-18	Dry	1/11/2016																											
SW3-18	Dry	8/12/2016																											
SW3-18	Dry	13/01/2017																											
SW3-18	Dry	1/02/2017																											
SW3-18	Visible flow	24/03/2017		4.28	0.12	5.40	24.1	5	1	4	0.02	0.86	50	50	50														
SW3-18	Insufficient water to monitor	24/04/2017																											
SW3-18	Dry	11/05/2017																											
SW3-18	Dry	8/06/2017																											
SW3-18	Insufficient water to monitor	24/07/2017																											
SW3-18	Insufficient water to monitor	3/08/2017																											
SW3-18	Weather fine. U/S and D/S not connected. Water level low. No observed flow. Sample taken in isolated pool. Surface film.	5/09/2017		4.72	0.31	5.58	14.4	5	1	13	0.02	0.39	13	50	50														
SW3-18	Upstream and downstream sites not connected. Low water level. Intermittent / isolated pool. Weather fine.	5/10/2017		2.51	0.37	6.55	18.8	8																					
SW3-18	Dry	2/11/2017																											
SW3-18	Dry	6/12/2017																											
SW3-18	Dry	23/01/2018																											
SW3-18	Dry - not sampled. Weather fine.	13/02/2018																											
SW3-18	Dry - not sampled.	20/03/2018																											
SW3-18	Dry - not sampled. Weather fine.	11/04/2018																											
SW3-18	Dry - not sampled. Weather fine.	8/05/2018																											
SW3-18	Waterway dry. Weather fine.	25/06/2018	11:15																										
SW3-18	Dry, not sampled.	16/07/2018	15:06																										
SW3-18	Waterway dry, not sampled.	8/08/2018	13:35																										
SW3-18	Dry - not sampled.	17/09/2018	12:46																										
SW3-18	Insufficient water to sample.	26/10/2018	13:00																										
SW3-18	Dry, not sampled.	5/11/2018																											
SW3-18	Dry, not sampled.	4/12/2018	13:45																										

SW3-18 - Unnamed tributary of Chaffin Creek

Dry Event Monitoring

[illegible]

SW3-18 - Unnamed tributary of Chaffin Creek

Dry Event Monitoring

[illegible]

SW3-18 - Unnamed tributary of Chaffin Creek

Wet Event Monitoring

[illegible]

SW3-18 - Unnamed tributary of Chaffin Creek

Wet Event Monitoring

[illegible]

SW3-18 - Unnamed tributary of Chaffin Creek

Wet Event Monitoring

[illegible]

SW3-20 - Champions Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Disolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-20	Dry	2/08/2016																											
SW3-20	Dry	8/09/2016																											
SW3-20	Dry	6/10/2016																											
SW3-20	Dry	1/11/2016																											
SW3-20		8/12/2016		1.31	0.38	5.08	20.7	88																					
SW3-20	Very low water level, no flow and stagnant. Not connected with SW3-19	13/01/2017		3.06	0.55	3.62	29.5	20	1	15	0.02	0.75	50	50	50														
SW3-20	Very low water level, no flow and stagnant. Not connected with SW3-19	1/02/2017		2.10	0.68	4.24	25.5	26																					
SW3-20	Visible flow	24/03/2017		0.62	0.13	5.54	25.2	2	1	3	0.04	1.06	50	50	50														
SW3-20	Stagnant water. No connection between u/s and d/s monitoring sites.	24/04/2017		0.00	0.27	5.55	21.0	1																					
SW3-20	Upstream and downstream sites not connected. No visible flow. Water level low, isolated pool. Moderate to heavy surface scum. Weather fine.	11/05/2017		0.30	0.26	5.01	19.0	9	1	27	0.02	0.45	50	50	50														
SW3-20	Weather fine. Not connected. Water level low. Stagnant	8/06/2017		0.77	0.27	5.70	15.0	9																					
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	24/07/2017		0.89	0.28	5.24	14.0	2	1	2	0.02	0.41	13	50	50														
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Heavy scum surface film. Weather fine.	3/08/2017		1.06	0.29	5.08	13.9	3																					
SW3-20	Weather fine. Unsure if U/S and D/S are connected. Water level very low. No observed flow. Lots of floating vegetation.	5/09/2017		1.04	0.31	4.20	14.2	5	1	20	0.02	0.38	13	50	50														
SW3-20	Upstream and downstream sites connected. Low water level. No visible flow. Surface scum. Weather fine.	5/10/2017		3.68	0.32	4.72	18.6	3																					
SW3-20	Upstream and downstream not connected, no fow. Water level low and stagnant.	2/11/2017		1.58	0.27	5.29	23.7	0	1	45	0.02	0.70	13	50	50														
SW3-20	No connection between upstream and downstream sites. No visible flow, low water level. Weather fine.	6/12/2017		3.75	0.23	5.28	25.0	2																					
SW3-20	Upstream and downstream not connected. No visible flow, very low water level. Weather fine.	23/01/2018		2.25	0.26	5.71	25.7	19	1	8	0.02	0.76	13	50	50														
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	13/02/2018		3.54	0.27	5.77	25.7	7																					
SW3-20	Unable to sample due to safety related access issues - moxies working in area.	20/03/2018																											
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	11/04/2018		1.03	0.27	5.60	22.7	38																					

SW3-20 - Champions Creek

Dry Event Monitoring

[illegible]

SW3-20 - Champions Creek

Dry Event Monitoring

[illegible]

SW3-20 - Champions Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-19	Not flowing	8/09/2016		5.31	0.18	5.74	17.3	71	1	20	0.05	1.00	50	50	50													
SW3-19	Not flowing	6/10/2016		3.51	0.20	5.17	18.7	6																				
SW3-19		1/11/2016		2.31	0.34	4.04	26.4	21	1	24	0.04	1.24	50	50	50													
SW3-19	Dry	8/12/2016																										
SW3-19	Dry	13/01/2017																										
SW3-19	Dry	1/02/2017																										
SW3-19	Visible flow	24/03/2017		0.37	0.13	5.67	25.4	0	1	4	0.04	1.03	50	50	50													
SW3-19		24/04/2017		0.44	0.15	5.62	20.2	102																				
SW3-19	Field data download error.	11/05/2017							1	3	0.03	0.62	50	50	50													
SW3-19	Weather fine. Not connected. Water level low. Stagnant.	8/06/2017		1.64	0.19	5.39	13.9	45																				
SW3-19	Insufficient water to monitor	24/07/2017																										
SW3-19	Insufficient water to monitor	3/08/2017																										
SW3-19	Weather fine. Unsure if U/S and D/S are connected. Water level very low. No observed flow. Lots of floating vegetation.	5/09/2017		3.06	0.15	4.82	18.6	4	1	24	0.02	0.77	13	50	50													
SW3-19	Insufficient water to sample.	5/10/2017																										
SW3-19	Upstream and downstream not connected, no fow. Water level low and stagnant.	2/11/2017		1.91	0.21	5.79	25.7	5	1	47	0.05	1.21	13	50	50													
SW3-19	No connecton between upstream and downstream sites. No visible flow, low water level. Weather fine.	6/12/2017		5.00	0.30	5.33	24.6	17																				
SW3-19	Dry	23/01/2018																										
SW3-19	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	13/02/2018		1.33	0.24	5.69	27.0	18																				
SW3-19	Dry - not sampled	20/03/2018																										
SW3-19	Dry - not sampled. Weather fine.	11/04/2018																										
SW3-19	Dry - not sampled. Weather fine.	8/05/2018																										
SW3-19	Waterway dry. Weather fine.	25/06/2018	11:12																									
SW3-19	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	16/07/2018	14:58	4.59	0.21	5.95	11.2	7	1	35	0.07	1.30	13	50	50													
SW3-19	Waterway dry, not sampled.	8/08/2018	13:29																									
SW3-19	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	17/09/2018	12:40	1.56	0.26	5.74	19.6	65	1	11	0.04	0.79	13	50	50													
SW3-19	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	26/10/2018	12:51	2.78	0.19	5.52	28.3	62																				
SW3-19	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2018	11:50	3.40	0.20	5.80	28.6	54	1	50	0.11	1.95	13	50	50													

SW3-20 - Champions Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-19	Dry, not sampled.	4/12/2018	13:55																									
SW3-19	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	9/01/2019	11:09	0.89	0.27	6.16	26.1	23	1	32	0.07	1.10	13	50	50													
SW3-19	Dry, not sampled.	7/02/2019	13:05																									
SW3-19	Dry, not sampled.	20/03/2019	10:06																									
SW3-19	Dry, not sampled.	24/04/2019	11:46																									
SW3-19	Dry, not sampled.	2/05/2019																										
SW3-19	Dry, not sampled.	14/06/2019	9:50																									
SW3-19	Insufficient water to monitor.	4/07/2019																										
SW3-19	Dry, not sampled	19/08/2019	11:45																									
SW3-19	Dry, not sampled.	19/09/2019	12:26																									
SW3-19	Dry, not sampled.	3/10/2019	12:57																									
SW3-19	Dry, not sampled.	5/11/2019	10:31																									
SW3-19	Dry, not sampled.	4/12/2019	12:40																									
SW3-19	Dry, not sampled.	8/01/2020	12:24																									
SW3-19	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	18/02/2020	13:34	0.66	0.14	5.97	27.9	9																				
SW3-19	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	3/03/2020	13:43	3.01	0.13	5.27	27.6	16	1	17	0.07	1.39	13	50	50													
SW3-19	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	15/04/2020	9:44	1.96	0.14	5.34	19.0	30																				
SW3-19	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	14/05/2020	11:59	3.77	0.27	5.42	18.3	66	1	51	0.02	0.90	13	50	50													
SW3-19	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	15/06/2020	10:48	1.22	0.40	6.49	16.7	3																				
SW3-19	Insufficient water to sample.	5/11/2020																										
SW3-19	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	25/05/2021	14:01	9.86	0.12	5.74	17.0	21	1	3	0.02	0.37	13	50	50	0.420	0.001	0.0010	0.002	0.002	2.830	0.005	0.320	0.0001	0.003	0.001	0.0005	0.006
SW3-19	Upstream and downstream connected. No visible flow. Low water level. Overcast. High NTU reading as a result of algae growth both up and downstream	17/11/2021	12:20	1.00	0.24	7.39	19.2	479	1	16	0.07	0.51	13	50	50	0.170	0.001	0.0010	0.001	0.002	15.800	0.005	0.740	0.0001	0.010	0.002	0.0015	0.006
SW3-19	Upstream and downstream sites connected. Very low flow, high water level. Weather fine.	9/05/2022	12:24	2.58	0.09	6.81	19.2	14	1	10	0.02	0.59	13	50	50	0.560	0.001	0.0010	0.001	0.002	1.970	0.005	0.085	0.0001	0.003	0.001	0.0005	0.007

SW3-20 - Champions Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Downstream Monitoring																												
SW3-20	Fast flowing water	4/08/2016		8.15	0.06	5.24	14.0	43																				
SW3-20	Low water level (0.3-0.5m), not flowing, no main channel identifiable. Photos taken.	25/08/2016		3.03	0.15	4.91	14.0	18	2	4	0.02	0.63	50	50	50													
SW3-20		10/11/2016		3.83	0.29	4.22	26.8	11	1	20	0.04	0.74	50	50	50													
SW3-20		6/12/2016		9.22	0.34	7.33	23.8	12																				
SW3-20	No flow, low water level. Sample taken from isolated pool of water. Not connected to SW3-19	7/01/2017		0.76	0.46	4.27	24.5	63	1	44	0.02	1.45	50	50	50													
SW3-20	No flow, low water level. Sample taken from isolated pool of water. Not connected to SW3-19	27/01/2017		1.53	0.68	3.98	24.2	14																				
SW3-20	Slight flow, low water level. Not connected to SW3-19.	28/02/2017		0.18	0.53	4.58	21.5	232																				
SW3-20	No connection between upstream and downstream monitoring sites.	7/03/2017		0.00	0.47	5.19	25.6	21	2	76	0.06	1.20	50	110	50													
SW3-20	Slight visible flow. No connection to upstream monitoring site, which was dry.	14/03/2017		3.00	0.34	5.73	22.7	52	1	45	0.02	0.50	50	50	50													
SW3-20	Weather showers. Connected. Water level moderate. Steady flow.	14/06/2017		5.53	0.06	5.55	16.1	13																				
SW3-20	Upstream and downstream sites not connected. Water level very low, no flow. Weather fine.	10/10/2017		2.08	0.35	8.00	23.4	7	1	11	0.04	0.92	13	50	50													
SW3-20	Upstream and downstream sites connected. Slight flow. Medium to high water level	16/10/2017		1.49	0.38	7.91	19.0	88																				
SW3-20	Upstream and downstream sites connected. Slight flow. Medium to high water level.	6/11/2017		3.29	0.26	5.63	23.8	22																				
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		0.84	0.33	5.65	24.2	25	1	34	0.02	0.64	13	50	50													
SW3-20	Upstream and downstream sites not connected, no visible flow, moderate water level. Overcast.	22/12/2017		5.92	0.38	5.64	23.6	65																				
SW3-20	Upstream and downstream sites not connected. No visible flow. Moderate water level. Weather fine.	4/01/2018		1.24	0.20	5.33	23.7	59																				
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		1.66	0.29	5.40	23.1	25	1	36	0.02	0.65	13	50	50													
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	21/02/2018		1.51	0.28	5.65	22.8	89	1	46	0.03	0.71	13	50	50													
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	7/03/2018		3.23	0.28	6.27	23.6	48																				
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	22/03/2018		3.15	0.27	5.53	24.2	21	1	43	0.04	1.08	13	50	50													
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/04/2018		0.70	0.30	5.19	21.2	24	1	27	0.02	0.87	13	50	50													
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	27/04/2018		7.04	0.30	6.24	19.7	47																				

SW3-20 - Champions Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/06/2018	11:00	2.40	0.32	5.85	16.1	53																					
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	28/06/2018	12:21	2.87	0.27	5.96	15.9	16	1	10	0.02	0.68	13	50	50														
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	27/08/2018	12:05	1.77	0.43	6.26	15.3	20	1	9	0.02	1.07	13	50	50														
SW3-20	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	7/09/2018	11:03	0.89	0.50	5.99	16.2	29																					
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	6/10/2018	9:51	4.08	0.46	6.55	19.1	17	1	6	0.02	0.37	13	50	50														
SW3-20	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	12/10/2018	12:41	4.08	0.38	6.49	18.0	21																					
SW3-20	No visible flow, very low water level. Overcast.	14/12/2018	10:56	9.22	0.51	7.34	22.1	44																					
SW3-20	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	17/12/2018	12:33	2.51	0.25	6.51	22.3	136	1	95	0.04	0.89	13	50	50														
SW3-20	No visible flow, very low water level. Weather fine.	22/02/2019	14:10	2.77	0.35	6.22	25.2	283	1	114	0.15	2.19	13	50	50														
SW3-20	No visible flow, very low water level. Rain.	16/03/2019	10:11	2.36	0.43	6.34	21.7	133																					
SW3-20	No visible flow, very low water level. Drizzle.	20/04/2019	15:33	0.27	0.58	5.68	19.6	18	1	32	0.02	0.71	13	50	50														
SW3-20	No visible flow, low water level. Drizzle.	16/05/2019	14:06	1.35	0.49	5.82	16.8	33																					
SW3-20	No visible flow, low water level. Drizzle.	24/06/2019	14:10	2.08	0.46	5.36	13.3	21	1	13	0.02	0.83	13	50	50														
SW3-20	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	28/06/2019	10:19	4.23	0.50	5.18	15.9	86																					
SW3-20	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	5/07/2019	10:51	2.35	0.51	4.87	16.6	51																					
SW3-20	Dry, not sampled.	12/10/2019	11:37																										
SW3-20	Dry, not sampled.	24/12/2019	13:02																										
SW3-20	Dry, not sampled.	16/01/2020	10:49																										
SW3-20	Upstream and downstream sites connected. High flow, high water level. Rain.	18/01/2020	9:58	7.55	0.07	5.50	21.6	263	1	89	0.06	1.40	13	50	50														
SW3-20	Upstream and downstream sites connected. Medium flow, very high water level. Overcast.	7/02/2020	11:15	2.59	0.20	6.06	23.2	33																					
SW3-20	Upstream and downstream sites connected. High flow. Sampled at bridge abutment due to very high water level. Overcast.	10/02/2020	12:17	2.44	0.09	6.22	24.9	16																					
SW3-20	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	27/03/2020	11:57	2.99	0.27	5.71	22.5	62	1	34	0.03	0.91	13	50	50														
SW3-20	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	31/03/2020	12:15	2.59	0.23	5.20	22.8	50	1	12	0.05	0.97	13	50	50														
SW3-20	Upstream and downstream sites connected. Low flow, high water level. Drizzle.	4/04/2020	10:32	2.45	0.12	5.06	21.7	92																					

SW3-20 - Champions Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW3-20	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	11:16	3.41	0.32	6.27	18.1	20	1	17	0.04	0.68	13	50	50														
SW3-20	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	8/08/2020	14:03	4.60	0.13	5.30	16.8	16																					
SW3-20	Upstream and downstream sites connected. High flow, very high water level. Rain.	16/12/2020	13:21	12.60	0.02	6.35	23.1	26	1	10	0.02	0.34	15	5	50	1.340	0.001	0.0010	0.002	0.002	0.610	0.005	0.035	0.0001	0.003	0.001	0.0005	0.026	
SW3-20	Upstream and downstream sites connected. Low flow, medium water level. Rain.	17/02/2021	12:42	2.59	0.18	6.32	23.3	10																					
SW3-20	Upstream and downstream sites connected. Low flow, high water level. Overcast.	3/05/2021	14:36	4.38	0.12	5.50	19.4	13	1	6	0.02	0.71	13	50	50	1.900	0.001	0.0010	0.002	0.002	2.600	0.005	0.130	0.0001	0.003	0.001	0.0005	0.012	
SW3-20	Upstream and downstream connected. No visable flow. Low water level. Overcast.	10/11/2021	12:26	1.03	0.22	7.14	23.6	111	1	14	0.04	0.66	13	50	50	0.310	0.001	0.0010	0.001	0.002	8.330	0.005	0.250	0.0001	0.003	0.001	0.0005	0.003	
SW3-20	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	4/07/2022	12:14	4.02	0.15	6.83	13.5	14	1	7	0.04	0.47	25	50	50	0.440	0.001	0.0010	0.001	0.002	3.270	0.005	0.150	0.0001	0.003	0.001	0.0005	0.001	
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.27	6.15		46	1	26	0.05	1.03	15	50	50	1.644	0.001	0.0010	0.002	0.002	6.642	0.005	0.504	0.0001	0.005	0.001	0.0005	0.021	
P20				1.88	0.13	5.11																							
St Dev					0.10	0.85																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW10		7/02/2013		5.06	0.25	5.78	23.0	9	3	27	0.12	1.30																	
Section3 SW10		29/05/2013		6.00	0.50	6.10	16.2	16	3	22	0.03	0.80																	
Section3 SW10		3/07/2013		6.74	0.13	5.97	16.0	41	3	6	0.03	0.90																	
Section3 SW10		14/11/2013		5.75	0.38	3.40	25.0	3	3	3	0.01	0.70																	
Upstream Monitoring																													
SW3-19	Fast flowing water.	4/08/2016		10.00	0.06	5.33	14.0	45																					
SW3-19	Sample point approx. 30 m from road (flow lying water level, not flowing), no main channel identifiable. Photos taken.	25/08/2016		9.87	0.14	5.05	15.4	2	1	4	0.02	0.96	50	50	50														
SW3-19		10/11/2016		2.62	0.17	4.76	28.7	9	1	8	0.02	0.52	50	50	50														
SW3-19	Dry	6/12/2016																											
SW3-19	Dry	7/01/2017																											
SW3-19	Dry	27/01/2017																											
SW3-19	Dry	28/02/2017																											

SW3-20 - Champions Creek

Wet Event Monitoring

[illegible]

SW3-20 - Champions Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-19	Dry, not sampled.	16/03/2019	10:18																									
SW3-19	Dry, not sampled.	20/04/2019	14:24																									
SW3-19	Dry, not sampled.	16/05/2019	13:01																									
SW3-19	Dry, not sampled.	24/06/2019	14:04																									
SW3-19	Insufficient water to sample.	28/06/2019																										
SW3-19	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	5/07/2019	11:20	2.40	0.38	4.18	17.6	22																				
SW3-19	Dry, not sampled.	12/10/2019	11:36																									
SW3-19	Dry, not sampled.	24/12/2019	13:00																									
SW3-19	Dry, not sampled.	16/01/2020	10:50																									
SW3-19	Upstream and downstream sites connected. High flow, high water level. Rain.	18/01/2020	9:52	11.69	0.06	5.70	21.8	309	1	124	0.09	1.55	13	50	50													
SW3-19	Upstream and downstream sites connected. Medium flow, very high water level. Overcast.	7/02/2020	11:17	1.81	0.20	6.00	23.2	33																				
SW3-19	Upstream and downstream sites connected. High flow. Sampled at bridge abutment due to very high water level. Overcast.	10/02/2020	12:19	2.95	0.11	6.12	24.8	14																				
SW3-19	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	27/03/2020	11:51	2.74	0.24	5.24	22.2	44	1	12	0.04	0.83	13	50	50													
SW3-19	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	31/03/2020	12:20	2.78	0.23	5.02	22.7	41	1	11	0.03	0.94	13	50	50													
SW3-19	Upstream and downstream sites connected. Low flow, high water level. Drizzle.	4/04/2020	10:30	2.14	0.13	5.00	21.7	89																				
SW3-19	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	11:20	2.89	0.33	6.24	17.3	85	1	13	0.04	0.71	13	50	50													
SW3-19	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	8/08/2020	14:06	3.19	0.18	5.54	16.6	10																				
SW3-19	Upstream and downstream sites connected. High flow, very high water level. Rain.	16/12/2020	13:24	10.55	0.02	6.51	23.1	27	1	14	0.02	0.31	15	5	50	1.640	0.001	0.0010	0.002	0.002	0.690	0.005	0.033	0.0001	0.003	0.001	0.0005	0.028
SW3-19	Upstream and downstream sites connected. Low flow, medium water level. Rain.	17/02/2021	12:44	2.30	0.19	6.05	22.8	13																				
SW3-19	Upstream and downstream sites connected. Low flow, high water level. Overcast.	3/05/2021	14:38	4.08	0.11	5.32	19.3	11	1	8	0.02	0.70	13	50	50	1.650	0.001	0.0010	0.002	0.002	2.620	0.005	0.130	0.0001	0.003	0.001	0.0005	0.009
SW3-19	Upstream and downstream connected. No visible flow. Medium water level. Overcast. Red staining in water and odour.	10/11/2021	12:30	1.43	0.29	7.22	20.8	150	1	2	0.05	0.54	13	50	50	0.190	0.001	0.0010	0.001	0.002	10.200	0.005	0.690	0.0001	0.009	0.001	0.0005	0.004
SW3-19	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	4/07/2022	12:18	1.90	0.16	6.81	13.8	21	1	6	0.02	0.37	25	50	50	0.160	0.001	0.0010	0.001	0.002	4.270	0.005	0.380	0.0001	0.003	0.001	0.0005	0.016

SW3-22 - Unnamed bodies of water

Dry Event Monitoring

[illegible]

SW3-22 - Unnamed bodies of water

Dry Event Monitoring

[illegible]

SW3-22 - Unnamed bodies of water

Dry Event Monitoring

[illegible]

SW3-22 - Unnamed bodies of water

Dry Event Monitoring

[illegible]

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-21	Upstream and downstream sites connected. Minimal flow. Low water level. Weather fine.	24/07/2017		1.92	0.14	5.81	14.8	7	1	2	0.02	0.24	13	50	50													
SW3-21	Upstream and downstream sites connected by a trickle. Minimal flow, low water level. Weather fine.	3/08/2017		1.74	0.14	5.67	14.3	7																				
SW3-21	Weather fine. U/S and D/S not connected. Water level low. No observed flow. Sample taken in isolated pool. Less algae in water then D/S site.	5/09/2017		3.35	0.15	5.40	15.5	0	1	4	0.02	0.25	13	50	50													
SW3-21	Upstream and downstream sites not connected. Low water level. Sampled in isolated pool. Weather fine.	5/10/2017		4.22	0.17	5.75	20.8	0																				
SW3-21	Upstream and downstream not connected. No flow, water level low.	2/11/2017		3.15	0.20	5.61	22.8	0	1	11	0.02	0.44	13	50	50													
SW3-21	No connection between upstream and downstream sites. No visible flow, low water level. Weather fine.	6/12/2017		2.00	0.21	5.64	25.0	50																				
SW3-21	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	23/01/2018		4.93	0.22	5.80	27.8	1	1	33	0.03	0.89	13	50	50													
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	13/02/2018		4.28	0.29	5.90	26.9	27																				
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	20/03/2018		4.26	0.21	6.09	25.8	3	1	51	0.05	1.34	13	50	50													
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	11/04/2018		4.27	0.22	5.90	22.7	30																				
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/05/2018		7.40	0.25	5.95	19.6	50	1	78	0.10	2.05	13	50	50													
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	25/06/2018	11:10	3.55	0.40	6.00	12.2	5																				
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	16/07/2018	14:11	4.53	0.32	6.24	13.5	7	1	9	0.02	0.58	13	50	50													
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/08/2018	13:18	5.92	0.37	6.30	15.4	340																				
SW3-21	No visible flow, very low water level. Weather fine.	17/09/2018	12:18	3.17	0.33	6.25	17.8	14	1	21	0.02	0.54	13	50	50													
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	26/10/2018	12:34	1.28	0.25	5.37	25.6	8																				
SW3-21	No visible flow, low water level. Weather fine.	5/11/2018	11:23	3.52	0.25	5.22	24.9	6	1	3	0.03	0.78	13	50	50													
SW3-21	No visible flow, very low water level. Weather fine.	4/12/2018	14:13	8.33	0.33	6.71	26.3	13																				
SW3-21	No visible flow, low water level. Overcast.	9/01/2019	10:48	2.32	0.27	5.39	26.1	33	1	28	0.06	1.57	13	50	50													
SW3-21	No visible flow, very low water level. Weather fine.	7/02/2019	12:48	1.24	0.30	5.67	26.1	18																				
SW3-21	Insufficient water to sample.	20/03/2019	9:59																									
SW3-21	No visible flow, very low water level. Weather fine.	24/04/2019	12:44	4.28	0.32	6.73	21.5	42																				
SW3-21	No visible flow, very low water level. Weather fine.	2/05/2019	11:58	4.62	0.38	6.69	20.4	6	1	26	0.27	2.31	13	50	50													

SW3-22 - Unnamed bodies of water

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time																									
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	14/06/2019	9:59	4.18	0.30	5.87	14.6	0																				
SW3-21	No visible flow, very low water level. Overcast.	4/07/2019	14:00	5.06	0.28	5.45	16.4	10	1	7	0.02	0.45	13	50	50													
SW3-21	No visible flow, very low water level. Weather fine.	19/08/2019	11:02	8.51	0.30	6.06	14.7	3																				
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	19/09/2019	12:22	4.84	0.23	5.94	20.4	53	1	42	0.06	0.77	13	50	50													
SW3-21	No visible flow, very low water level. Weather fine.	3/10/2019	12:54	6.12	0.29	6.73	22.4	27																				
SW3-21	No visible flow, very low water level. Overcast.	5/11/2019	10:49	5.24	0.33	6.84	21.2	9	1	40	0.16	1.64	50	50	50													
SW3-21	Dry, not sampled.	4/12/2019	12:51																									
SW3-21	Insufficient water to sample.	8/01/2020	12:12																									
SW3-21	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	18/02/2020	13:42	5.97	0.12	5.95	24.3	3																				
SW3-21	Upstream and downstream sites connected. Medium flow, high water level. Overcast.	3/03/2020	13:15	6.30	0.14	6.07	25.5	9	1	8	0.02	0.65	13	50	50													
SW3-21	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	15/04/2020	9:26	5.21	0.15	5.72	19.2	7																				
SW3-21	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	14/05/2020	12:14	6.88	0.20	5.88	21.0	13	1	5	0.02	0.40	13	50	50													
SW3-21	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	15/06/2020	11:02	4.90	0.20	6.21	17.7	4																				
SW3-21	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/11/2020	12:56	4.02	0.22	5.57	23.2	13	1	61	0.05	1.43	13	50	50	0.170	0.001	0.0010	0.002	0.002	5.670	0.005	0.390	0.0001	0.003	0.001	0.0005	0.110
SW3-21	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	25/05/2021	14:19	7.49	0.12	6.16	17.6	14	1	7	0.02	0.31	13	50	50	1.590	0.001	0.0010	0.002	0.002	1.670	0.005	0.087	0.0001	0.003	0.001	0.0005	0.002
SW3-21	Upstream and downstream connected. No visible flow. Low water level. Overcast.	17/11/2021	12:37	6.80	0.22	7.35	26.4	2	1	2	0.02	0.37	13	50	50	0.330	0.002	0.0010	0.001	0.002	2.580	0.005	0.130	0.0001	0.003	0.002	0.0015	0.004
SW3-21	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	9/05/2022	12:42	7.55	0.12	6.67	18.6	13	1	9	0.02	0.20	13	50	50	0.350	0.001	0.0010	0.001	0.002	1.140	0.005	0.059	0.0001	0.003	0.001	0.0005	0.005

SW3-22 - Unnamed bodies of water

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-22		4/08/2016		8.51	0.07	5.42	14.8	17																					
SW3-22	Measurements taken directly from fast flowing stream	25/08/2016		7.17	0.13	5.63	14.8	1	2	1	0.02	0.61	50	50	50														
SW3-22		10/11/2016		3.88	0.21	5.91	25.0	2	1	6	0.02	0.45	50	250	50														
SW3-22	Dry	6/12/2016																											
SW3-22	Dry	7/01/2017																											
SW3-22	Dry	27/01/2017																											
SW3-22	Dry	28/02/2017																											
SW3-22	Dry	7/03/2017																											
SW3-22	Dry	14/03/2017																											
SW3-22	Weather showers. Connected. Water level moderate. Steady flow.	14/06/2017		7.85	0.07	6.01	16.6	4																					
SW3-22	Upstream and downstream sites not connected. Very low water level. Weather fine.	10/10/2017		4.92	0.18	8.11	25.6	5	1	22	0.05	0.64	13	50	50														
SW3-22	Unable to gain wet weather access to site.	16/10/2017																											
SW3-22	Unable to gain access due to piling works.	6/11/2017																											
SW3-22	Upstream and downstream sites not connected. No visible flow, low water level. Weather, fine.	2/12/2017		6.04	0.24	6.58	26.9	23	1	19	0.02	0.40	13	50	50														
SW3-22	Upstream and downstream sites not connected, no visible flow, low water level. Overcast.	22/12/2017		6.25	0.46	5.29	24.9	13																					
SW3-22	Upstream and downstream sites not connected. No visible flow. Low water level. Weather fine.	4/01/2018		1.84	0.17	5.38	22.2	171																					
SW3-22	Insufficient water to sample	5/02/2018																											
SW3-22	Upstream and downstream sites not connected. Sampled in isolated pool of water. No visible flow, very low water level. Drizzle.	21/02/2018		2.60	0.24	6.19	23.9	191	1	101	0.03	1.45	13	50	50														
SW3-22	Upstream and downstream sites not connected. Sampled in isolated pool. No visible flow, low water level. Weather fine.	7/03/2018		5.56	0.24	6.33	24.2	48																					
SW3-22	Unable to sample - unsafe to access due to crane loading bridge girders	22/03/2018																											
SW3-22	Dry	20/04/2018																											
SW3-22	Dry	27/04/2018																											
SW3-22	Upstream and downstream sites not connected - sampled within isolated pool. No visible flow, very low water level. Weather fine.	8/06/2018	10:40	5.46	0.21	6.91	14.9	123																					
SW3-22	Dry, not sampled. Weather fine.	28/06/2018	12:35																										
SW3-22	Dry, not sampled. Weather fine.	27/08/2018	11:59																										

SW3-22 - Unnamed bodies of water

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-22	Dry, not sampled.	7/09/2018	10:57																									
SW3-22	Dry, not sampled.	6/10/2018	10:24																									
SW3-22	Insufficient water to sample.	12/10/2018	13:09																									
SW3-22	Dry, not sampled.	14/12/2018	11:32																									
SW3-22	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	17/12/2018	12:24	4.52	0.10	5.58	22.4	17	1	7	0.02	0.86	13	50	50													
SW3-22	Dry, not sampled.	22/02/2019	13:53																									
SW3-22	Dry, not sampled.	16/03/2019	9:51																									
SW3-22	Dry, not sampled.	20/04/2019	14:46																									
SW3-22	Dry, not sampled.	16/05/2019	13:16																									
SW3-22	Dry, not sampled.	24/06/2019	13:42																									
SW3-22	Insufficient water to sample.	28/06/2019																										
SW3-22	Dry, not sampled.	5/07/2019																										
SW3-22	Dry, not sampled.	12/10/2019	11:34																									
SW3-22	Dry, not sampled.	24/12/2019	13:08																									
SW3-22	Dry, not sampled.	16/01/2020	10:51																									
SW3-22	Upstream and downstream sites connected. High flow, medium water level. Rain.	18/01/2020	9:33	7.29	0.08	5.55	21.7	257	1	186	0.08	1.63	13	50	50													
SW3-22	Upstream and downstream sites connected. Medium flow, very high water level. Overcast.	7/02/2020	11:26	6.90	0.11	6.37	22.9	10																				
SW3-22	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	10/02/2020	12:35	6.55	0.11	6.76	25.2	54																				
SW3-22	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	27/03/2020	11:37	5.23	0.20	5.99	23.0	18	1	10	0.02	0.63	13	50	50													
SW3-22	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	31/03/2020	12:38	7.65	0.14	5.88	22.8	7	1	1	0.02	0.34	13	50	50													
SW3-22	Upstream and downstream sites connected. High flow, medium water level. Overcast.	4/04/2020	10:12	6.83	0.13	5.71	21.5	9																				
SW3-22	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	11/06/2020	11:41	3.47	0.23	6.21	17.5	26	1	8	0.04	0.71	13	50	50													
SW3-22	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	8/08/2020	11:22	7.25	0.12	4.07	15.0	8																				
SW3-22	Upstream and downstream sites connected. Very high flow, very low water level. Rain.	16/12/2020	13:39	14.15	0.01	6.29	21.8	131	1	81	0.03	0.77	15	5	50	5.930	0.001	0.0010	0.003	0.002	2.260	0.005	0.038	0.0001	0.003	0.001	0.0005	0.008
SW3-22	Upstream and downstream sites connected. Low flow, low water level. Drizzle.	16/02/2021	13:28	9.11	0.12	6.56	28.1	8																				
SW3-22	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	3/05/2021	14:50	5.58	0.14	5.88	20.3	32	8	25	0.02	0.72	13	50	50	3.230	0.001	0.0010	0.002	0.002	2.730	0.005	0.097	0.0001	0.003	0.001	0.0005	0.130

SW3-22 - Unnamed bodies of water

Wet Event Monitoring

[illegible]

SW3-22 - Unnamed bodies of water

Wet Event Monitoring

[illegible]

SW3-22 - Unnamed bodies of water

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW3-21	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	28/06/2019	10:06	5.00	0.26	6.12	14.9	6																				
SW3-21	No visible flow, very low water level. Drizzle.	5/07/2019	11:04	4.70	0.29	5.33	15.6	12																				
SW3-21	No visible flow, very low water level. Overcast.	12/10/2019	10:32	3.86	0.29	6.63	16.7	2	1	15	0.03	0.50	13	50	50													
SW3-21	Insufficient water to monitor.	24/12/2019	13:06																									
SW3-21	Dry, not sampled.	16/01/2020	10:52																									
SW3-21	Upstream and downstream sites connected. High flow, medium water level. Rain.	18/01/2020	9:25	8.55	0.08	5.36	21.7	202	1	75	0.05	1.42	13	50	50													
SW3-21	Upstream and downstream sites connected. Medium flow, very high water level. Overcast.	7/02/2020	11:24	7.18	0.11	6.37	22.9	9																				
SW3-21	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	10/02/2020	12:31	6.89	0.10	6.43	24.0	5																				
SW3-21	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	27/03/2020	11:31	3.74	0.20	5.66	21.8	20	1	10	0.02	0.50	13	50	50													
SW3-21	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	31/03/2020	12:35	8.02	0.14	5.80	21.5	6	1	1	0.02	0.34	13	50	50													
SW3-21	Upstream and downstream sites connected. High flow, medium water level. Overcast.	4/04/2020	10:09	7.19	0.13	5.92	21.8	10																				
SW3-21	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	11/06/2020	11:48	5.07	0.20	6.15	17.4	13	1	8	0.02	0.42	13	50	50													
SW3-21	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	8/08/2020	11:18	8.48	0.14	4.13	14.6	9																				
SW3-21	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	16/12/2020	13:42	14.18	0.01	6.10	21.8	132	1	75	0.03	0.75	15	5	50	5.450	0.001	0.0010	0.003	0.002	2.080	0.005	0.036	0.0001	0.003	0.001	0.0005	0.008
SW3-21	Upstream and downstream sites connected. Very low flow, low water level. Drizzle.	16/02/2021	13:25	7.61	0.13	6.93	27.7	9																				
SW3-21	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	3/05/2021	14:54	6.95	0.14	5.96	19.4	14	1	16	0.02	0.38	13	50	50	2.350	0.001	0.0010	0.002	0.002	2.290	0.005	0.180	0.0001	0.003	0.001	0.0005	0.006
SW3-21	Upstream and downstream connected. Very low flow. Low water level. Overcast.	10/11/2021	12:49	3.55	0.19	7.12	24.4	19	1	5	0.02	0.39	13	50	50	1.140	0.001	0.0010	0.001	0.002	2.220	0.005	0.140	0.0001	0.003	0.001	0.0005	0.001
SW3-21	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	4/07/2022	12:34	5.65	0.17	6.84	14.4	13	1	7	0.02	0.20	25	50	50	0.420	0.001	0.0010	0.001	0.002	1.790	0.005	0.120	0.0001	0.003	0.001	0.0005	0.001

Dry Event Monitoring

Downstream Monitoring

Dry Event Monitoring

[illegible][illegible]

SW3-23 - South Arm Clarence River

Dry Event Monitoring

[illegible]

SW3-23 - South Arm Clarence River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW3-23		4/08/2016		6.59	0.08	5.73	14.7	215																					
SW3-23		10/11/2016		5.29	5.64	6.89	26.3	1	1	15	0.02	0.42	50	50	50														
SW3-23		6/12/2016		7.86	8.20	7.23	27.4	5																					
SW3-23	Tidal	7/01/2017		4.66	11.50	6.36	27.1	11	1	13	0.02	0.56	50	50	50														
SW3-23	Tidal	28/02/2017		4.38	14.10	7.12	25.2	10																					
SW3-23	Tidal	7/03/2017		3.88	13.00	7.01	26.9	10	1	13	0.02	0.50	50	50	50														
SW3-23	Weather showers. Outgoing tide. Water level high. Cane drain and culvert in close proximity to sample site.	14/06/2017		3.80	0.10	6.03	16.7	19																					
SW3-23	High tide. Weather fine.	10/10/2017		5.93	14.30	7.73	24.8	3	1	4	0.03	0.63	13	50	50														
SW3-23	Outgoing tide, low flow. Mid water level. Raining.	16/10/2017		7.89	13.20	7.95	21.9	16																					
SW3-23	Outgoing tide, high water level, moderate flow.	6/11/2017		5.69	2.88	7.03	25.8	1																					
SW3-23	Incoming tide, high water level. Weather, fine.	2/12/2017		3.96	1.79	7.71	25.8	1	1	11	0.02	0.50	13	50	50														
SW3-23	Low to mid water level, incoming tide. Overcast.	22/12/2017		5.10	0.71	7.04	26.7	60																					
SW3-23	Moderate flow, high water level. Weather fine.	4/01/2018		4.60	0.48	7.26	27.6	33																					
SW3-23	Low flow, medium water level. Outgoing tide. Overcast.	5/02/2018		5.21	1.63	6.45	25.4	8	1	7	0.05	1.01	13	50	50														
SW3-23	Low flow, low water level. Incoming tide. Weather fine.	7/03/2018		4.98	0.62	7.32	23.9	225																					
SW3-23	Very low flow, low water level. Incoming tide. Weather fine.	20/04/2018		5.16	1.26	7.44	24.9	10	1	5	0.07	1.72	13	50	50														
SW3-23	Very low flow, medium water level. Outgoing tide. Weather fine.	8/06/2018	10:01	7.88	8.56	6.96	17.2	15																					
SW3-23	No visible flow, medium water level. Outgoing tide. Weather fine.	27/08/2018	11:29	5.33	15.00	7.62	16.8	8	1	6	0.02	0.43	13	50	50														
SW3-23	No visible flow, medium water level. Outgoing tide. Weather fine.	7/09/2018	10:22	6.96	15.60	7.46	18.7	12																					
SW3-23	Very low flow, medium water level. Incoming tide. Weather fine.	6/10/2018	9:20	6.29	16.50	7.32	21.2	4	1	4	0.02	0.44	13	50	50														
SW3-23	Medium flow, medium water level. Outgoing tide. Overcast.	14/12/2018	10:30	6.69	6.17	7.77	26.7	6																					
SW3-23	Very low flow, high water level. Incoming tide. Weather fine.	22/02/2019	13:30	4.29	10.20	7.48	26.9	11	1	15	0.02	0.73	13	50	50														
SW3-23	Very low flow, medium water level. Outgoing tide. Rain.	16/03/2019	9:33	6.71	15.10	7.72	26.7	19																					
SW3-23	No visible flow, low water level. Outgoing tide. Overcast.	20/04/2019	16:21	4.69	10.30	6.89	23.3	39	1	33	0.02	0.72	13	50	50														
SW3-23	High flow, medium water level. Outgoing tide. Drizzle.	16/05/2019	13:42	7.61	15.40	6.56	20.1	8																					
SW3-23	High flow, medium water level. Outgoing tide. Rain.	24/06/2019	14:45	7.33	18.70	7.20	15.9	16	1	4	0.02	1.72	13	50	50														
SW3-23	Very low flow, medium water level. Incoming tide. Drizzle.	5/07/2019	10:26	8.70	18.50	7.41	17.4	15																					
SW3-23	No access. Site is accessed via cane pad which was in full use. Could not walk in due to safety concerns.	12/10/2019	12:01																										
SW3-23	Very low flow, medium water level. Outgoing tide. Overcast.	24/12/2019	13:40	3.74	29.50	7.19	27.4	5																					

Wet Event Monitoring

Upstream Monitoring

No upstream monitoring site

SW4-02 - Shark Swamp overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Downstream Monitoring																												
SW4-02		2/08/2016		9.08	0.00	3.04	17.0	16																				
SW4-02	Flowing	8/09/2016		9.04	1.61	4.48	18.1	22	2	33	0.15	1.06	50	50	50													
SW4-02		7/10/2016		4.71	1.93	7.02	19.7	102																				
SW4-02	Dry	3/11/2016																										
SW4-02		5/12/2016		6.93	2.50	6.86	32.7	187																				
SW4-02	Very low water level, no flow and stagnant. Not connected with SW4-01	18/01/2017		7.85	4.23	7.16	37.6	119	1	39	0.08	8.09	13	50	50													
SW4-02	Very low water level, no flow and stagnant. Not connected with SW4-01	1/02/2017		3.56	4.79	2.98	32.2	0																				
SW4-02	Stagnant, no observable flow.	10/03/2017		4.17	1.64	5.16	24.9	7	3	22	0.03	3.90	50	120	50													
SW4-02		12/04/2017		0.00	0.29	6.44	20.7	5																				
SW4-02	Tidal. Low flow. U/s and d/s sites connected. Outgoing tide.	3/05/2017		0.50	2.18	3.95	20.4	31	1	42	0.05	2.12	50	330	50													
SW4-02	Weather fine. Connected. Level and flow moderate.	7/06/2017		3.84	2.67	3.44	16.2	4																				
SW4-01	Weather fine. Upstream and downstream connected. Incoming tide, therefore SW4-01 is downstream. Flow gentle and level moderate.	14/07/2017		3.98	1.84	3.68	16.1	7	1	13	0.06	0.89	13	50	50													
SW4-02	Upstream and downstream sites connected. Outgoing tide, moderate flow. Moderate water level. Weather fine.	7/08/2017		5.96	5.52	3.63	17.6	67																				
SW4-02	Weather fine. U/S and D/S connected. No observed flow. Low water level. Replicate 2 taken. Water observed entering the site 10m U/S from cane drain.	5/09/2017		7.79	7.62	3.30	17.8	9	1	9	0.02	1.03	13	50	50													
SW4-02	Upstream and downstream sites connected. Medium water level. Weather fine.	5/10/2017		3.12	9.05	3.71	26.5	47																				
SW4-02	Upstream and downstream sites connected. Medium water level. Weather fine.	3/11/2017		2.25	2.34	3.75	27.7	11	1	7	0.02	0.64	13	50	50													
SW4-01	Upstream and downstream connected. Little flow, moderate water level. Incoming tide, therefore SW4-01 is downstream. Weather fine.	7/12/2017		6.35	2.09	7.22	26.9	24																				
SW4-01	Upstream and downstream connected. No visible flow, medium water level. Weather fine.	17/01/2018		4.96	2.06	6.06	29.1	202	1	131	0.26	2.86	13	50	50													
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	14/02/2018		2.70	1.73	7.13	29.0	35																				
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	20/03/2018		1.51	2.46	5.30	25.6	43	1	18	0.03	1.00	13	50	50													

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

SW4-02 - Shark Swamp overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW23		27/02/2013		5.13	0.22	6.49	25.8	43	3	27	0.08	0.70																
Section3 SW23		19/03/2013		4.98	0.12	6.35	24.2	19	3	3	0.17	1.30																
Section3 SW23		17/04/2013		4.04	0.24	5.83	25.1	16	3	11	0.11	1.20																
Section3 SW23		21/05/2013		7.34	1.09	4.03	17.2	5	3	8	0.03	0.50																
Section3 SW23		26/06/2013		8.42	1.15	5.02	15.9	9	3	7	0.04	1.10																
Section3 SW23		23/07/2013		8.30	1.11	3.96	17.7	9	3	7	0.03	0.34																
Section3 SW23		20/08/2013		10.46	1.48	4.89	18.0	4	3	3	0.01	0.62																
Section3 SW23		24/09/2013		8.15	1.74	4.33	22.7	9	3	13	0.05	0.70																
Section3 SW23		22/10/2013		8.86	2.16	3.80	30.7	5	3	9	0.02	0.62																
Section3 SW23		28/11/2013		7.54	1.46	3.38	28.6	4	3	3	0.01	0.60																
Upstream Monitoring																												
SW4-01		2/08/2016		8.76	2.58	3.30	14.1	32																				
SW4-01	Flowing	8/09/2016		2.57	1.54	5.32	18.8	50	1	53	0.29	1.87	50	50	50													
SW4-01		7/10/2016		0.00	1.90	6.92	15.9	100																				
SW4-01	Dry	3/11/2016																										
SW4-01		5/12/2016		7.59	2.78	6.75	29.0	10																				
SW4-01	Very low, no flow and stagant. Not connected with SW4-02	18/01/2017		4.43	4.20	7.10	41.1	103	1	8	0.02	2.68	13	50	50													
SW4-01	Very low, no flow and stagant. Not connected with SW4-02	1/02/2017		2.85	4.61	4.41	27.6	4																				
SW4-01	Stagnant, no observable flow.	10/03/2017		4.54	1.90	5.53	25.1	7	1	14	0.03	3.20	50	140	50													
SW4-01		12/04/2017		0.00	0.28	6.44	21.6	2																				
SW4-01	Tidal. Low flow. U/s and d/s sites connected. Outgoing tide.	3/05/2017		0.26	2.17	4.13	20.5	81	1	131	0.15	2.48	180	640	50													
SW4-01	Weather fine. Connected. Level and flow moderate.	7/06/2017		3.42	2.69	3.42	16.1	5																				
SW4-02	Weather fine. Upstream and downstream connected. Incoming tide therefore SW4-02 is upstream. Flow gentle and level moderate.	14/07/2017		3.68	1.87	3.65	16.8	7	1	11	0.05	0.87	13	50	50													
SW4-01	Upstream and downstream sites connected. Outgoing tide, moderate flow. Moderate water level. Weather fine.	7/08/2017		6.12	6.11	3.49	18.4	87																				
SW4-01	Weather fine. U/S and D/S connected. No observed flow. Low water level.	5/09/2017		8.19	7.77	3.50	18.6	21	1	14	0.02	1.22	13	50	50													

Dry Event Monitoring

[illegible]

SW4-02 - Shark Swamp overflow

Dry Event Monitoring

[illegible]

SW4-02 - Shark Swamp overflow

Dry Event Monitoring

[illegible]

SW4-02 - Shark Swamp overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW4-02		4/08/2016		5.12	0.20	5.61	14.8	163																					
SW4-02		11/11/2016		3.26	1.94	7.95	27.5	287	12	1230	1.38	5.24	50	240	50														
SW4-02	Dry	6/01/2017																											
SW4-02	Very low, no flow and not connected to SW4-01	1/03/2017		7.04	2.26	3.70	27.2	85	1	46	0.16	8.20	13	50	50														
SW4-02	Tidal	7/03/2017		8.42	1.94	3.79	23.5	40																					
SW4-02	Heavy anoxic odour. Dark stain to water. Med-high flow.	6/04/2017		0.00	0.24	6.49	21.8	7	1	9	0.25	1.51	50	50	50														
SW4-02	Low water level. No visible flow. U/s and d/s sites connected. Drizzle.	4/05/2017		0.00	2.07	3.93	19.8	25																					
SW4-02	Weather showers. Upstream and downstream sites connected. High tide, outgoing. Slightly turbid water.	13/06/2017		4.48	0.19	5.83	17.9	95	1	29	0.11	1.26	13	50	50														
SW4-01	Weather fine. Upstream and downstream connected. Incoming tide therefore SW4-01 is downstream. Flow gentle and level moderate.	17/07/2017		5.38	2.03	3.53	17.0	37																					
SW4-02	Upstream and downstream sites connected. Outgoing tide, medium water level. Weather fine.	9/10/2017		5.04	8.03	4.04	29.0	35	1	19	0.02	2.46	13	50	50														
SW4-01	Conncted. Incoming tide, therefore SW4-01 is downstream. Medium water level.	7/11/2017		1.87	2.37	3.81	24.7	44																					
SW4-01	Upstream and downstream sites connected. Medium water level, incoming tide, therefore SW4-01 is downstream. Weather fine.	11/12/2017		4.93	2.15	7.37	27.3	5	1	14	0.04	1.53	13	50	50														
SW4-02	Upstream and downstream sites connected. No visible flow- slack water. High water level. Weather fine.	3/01/2018		2.21	0.80	6.18	26.2	98																					
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	6/02/2018		2.41	1.60	6.83	22.5	122	1	26	0.08	1.79	13	50	50														
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Weather fine.	7/03/2018		1.44	2.16	6.92	23.4	61																					
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	9/05/2018		3.92	1.90	6.66	21.4	73	1	37	0.06	1.06	13	50	50														
SW4-01	Upstream and downstream sites connected. No visible flow, high water level. Incoming tide. Overcast.	7/06/2018	13:35	4.22	1.39	6.76	16.4	206																					
SW4-02	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Rain.	5/09/2018	10:51	3.51	0.77	6.96	14.9	410	1	184	0.30	1.63	13	50	50														
SW4-02	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Rain.	12/10/2018	14:25	4.87	11.00	6.39	20.8	14																					
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	29/11/2018	11:20	6.63	3.12	7.52	26.5	37	1	50	0.06	1.72	13	50	50														

SW4-02 - Shark Swamp overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW4-02	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Overcast.	17/12/2018	11:22	5.64	0.49	6.43	24.4	629																				
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	22/02/2019	12:32	2.47	1.94	7.29	24.5	446	1	168	0.23	3.55	13	50	50													
SW4-01	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	9/03/2019	10:55	5.91	2.98	7.93	25.2	83																				
SW4-02	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	4/04/2019	14:27	8.48	2.82	8.14	24.0	168	1	69	0.14	1.87	13	50	50													
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	25/06/2019	11:48	5.89	3.66	6.80	14.2	133																				
SW4-02	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Overcast.	1/08/2019	12:16	5.83	7.41	6.82	17.7	29	1	13	0.03	0.81	13	50	50													
SW4-02	Unable to determine if upstream and downstream sites were connected. No visible flow, very low water level. Outgoing tide. Overcast.	24/12/2019	14:50	2.01	11.90	4.69	29.5	153																				
SW4-02	Insufficient water to sample.	15/01/2020	10:15																									
SW4-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Rain.	6/02/2020	14:15	4.93	1.42	7.30	22.9	106																				
SW4-02	Upstream and downstream sites connected. Very low flow, high water level. Drizzle.	7/03/2020	11:02	1.37	0.52	5.46	24.6	55	1	19	0.32	1.86	13	50	50													
SW4-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/04/2020	9:00	8.31	0.29	5.54	22.5	181																				
SW4-01	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Drizzle.	11/06/2020	12:13	5.31	2.19	5.95	18.7	29	1	42	0.13	1.82	13	50	50													
SW4-02	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	8/08/2020	10:57	1.84	2.57	2.18	14.0	5																				
SW4-02	Upstream and downstream sites connected. Low flow, high water level. Outflowing flood waters. Drizzle.	16/12/2020	8:46	6.95	0.07	6.81	24.3	49	1	5	0.11	0.94	15	5	50	2.420	0.001	0.0010	0.002	0.002	1.350	0.005	0.054	0.0001	0.003	0.001	0.0005	0.014
SW4-01	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	17/02/2021	10:40	9.22	1.10	6.91	23.4	37																				
SW4-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	3/05/2021	11:41	1.68	0.67	4.37	19.5	8	1	11	0.02	0.55	13	50	50	0.110	0.001	0.0010	0.002	0.002	2.590	0.005	0.440	0.0001	0.003	0.001	0.0005	0.022
SW4-02	Upstream and downstream connected. No visible flow. Low water level. Outgoing tide. Rain.	11/11/2021	13:37	5.31	1.12	8.11	24.7	10	1	7	0.02	0.60	13	50	50	0.280	0.001	0.0010	0.001	0.002	0.930	0.005	0.390	0.0001	0.014	0.002	0.0015	0.028

SW4-02 - Shark Swamp overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW4-01	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Overcast.	4/07/2022	14:24	3.17	0.59	6.54	13.7	10	1	5	0.02	0.41	25	50	50	0.084	0.001	0.0010	0.001	0.002	1.760	0.005	0.350	0.0001	0.003	0.001	0.0005	0.008
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					3.13	7.19		132	2	38	0.22	2.42	13	50	50	1.268	0.001	0.0010	0.002	0.003	2.592	0.005	0.558	0.0001	0.013	0.001	0.0009	0.041
P20				2.36	0.61	4.32																						
St Dev					5.12	1.46																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW23		7/02/2013		1.52	0.16	6.17	22.4	26	3	22	0.21	0.40																
Section3 SW23		28/05/2013		6.98	1.14	4.24	19.7	12	3	11	0.03	1.50																
Section3 SW23		1/07/2013		7.73	1.38	5.47	17.1	47	3	33	0.11	3.90																
Section3 SW23		13/11/2013		5.91	0.48	4.54	24.8	331	3	170	0.10	9.10																
Section3 SW23		17/12/2013		11.89	1.19	3.65	30.6	11	7	4	0.50	0.30																
Upstream Monitoring																												
SW4-01		4/08/2016		4.82	0.13	5.58	14.6	209																				
SW4-01		11/11/2016		0.00	2.51	7.62	27.2	800	2	80	2.67	7.48	50	220	50													
SW4-01	Very low, no flow and not connected to SW3-02.	6/01/2017		5.85	4.13	7.23	24.8	24																				
SW4-01	Very low, no flow and not connected to SW3-02.	1/03/2017		6.86	3.15	3.67	27.3	34	1	32	0.08	19.70	13	50	50													
SW4-01	Tidal	7/03/2017		3.37	1.90	4.26	24.2	48																				
SW4-01	Heavy anoxic odour. Dark stain to water. Med-high flow.	6/04/2017		0.00	0.26	6.53	22.2	7	1	14	0.39	1.77	50	50	50													
SW4-01	Low water level. No visible flow. U/s and d/s sites connected. Drizzle.	4/05/2017		0.33	2.08	3.93	19.9	24																				
SW4-01	Weather showers. Upstream and downstream sites connected. High tide, outgoing. Slightly turbid water.	13/06/2017		5.28	0.22	5.65	18.1	32	1	18	0.09	1.30	13	50	50													
SW4-02	Weather fine. Upstream and downstream connected. Incoming tide therefore SW4-02 is upstream. Flow gentle and level moderate.	17/07/2017		4.56	2.10	3.66	17.5	0																				
SW4-01	Upstream and downstream sites connected. Outgoing tide, medium water level. Weather fine.	9/10/2017		7.83	8.06	3.99	30.7	44	1	17	0.02	2.36	13	50	50													
SW4-02	Connected. Incoming tide, therefore SW4-02 is upstream. Moderate water level.	7/11/2017		1.11	2.47	3.75	24.4	78																				

Wet Event Monitoring

[illegible]

SW4-02 - Shark Swamp overflow

Wet Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

SW4-04 - Shark Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW4-04	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	19/08/2019	12:13	8.23	19.00	7.60	18.3	2																				
SW4-04	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	19/09/2019	13:47	4.77	15.90	7.42	21.1	4	1	11	0.02	0.27	13	50	50													
SW4-04	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	10/10/2019	11:23	3.94	22.70	7.07	22.7	4																				
SW4-03	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	5/11/2019	11:47	4.70	25.40	7.58	23.7	8	1	13	0.03	0.74	50	50	50													
SW4-04	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	7/12/2019	8:19	4.42	29.20	7.43	25.8	3																				
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	8/01/2020	11:55	2.90	29.70	7.62	30.0	6	1	9	0.02	0.31	13	13	50													
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	18/02/2020	15:03	4.02	0.06	6.04	27.8	43																				
SW4-04	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	3/03/2020	10:03	1.22	0.15	5.43	26.0	13	1	8	0.07	1.16	13	50	50													
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	6/04/2020	13:46	6.18	0.45	6.62	25.1	14																				
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	14/05/2020	13:29	4.65	2.76	6.54	19.6	21	1	79	0.04	1.01	13	50	50													
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	15/06/2020	12:29	5.15	3.25	4.26	17.7	2																				
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	12/11/2020	10:51	6.47	16.10	6.80	24.6	16	1	14	0.02	0.43	13	50	50	0.270	0.001	0.0010	0.002	0.002	0.350	0.005	0.500	0.0001	0.006	0.001	0.0005	0.620
SW4-03	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	26/05/2021	10:20	10.82	0.19	6.20	16.6	10	1	10	0.03	0.70	13	50	50	1.020	0.001	0.0010	0.002	0.002	3.190	0.005	0.091	0.0001	0.003	0.001	0.0005	0.074
SW4-03	Upstream and downstream connected. Very low flow. Medium water level. Incoming tide. Overcast.	18/11/2021	10:28	7.57	0.36	7.98	24.4	10	1	5	0.04	0.45	13	50	50	1.020	0.001	0.0010	0.001	0.002	0.880	0.005	0.081	0.0001	0.003	0.002	0.0015	0.076
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	4/05/2022	11:30	0.83	0.13	6.14	20.3	32	1	8	0.03	0.61	13	50	50	0.580	0.001	0.0010	0.001	0.002	3.000	0.005	0.110	0.0001	0.003	0.001	0.0005	0.036
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					15.20	7.44		17	3	23	0.05	0.96	13	50	50	1.082	0.001	0.0010	0.002	0.002	3.074	0.005	0.258	0.0001	0.003	0.001	0.0009	0.554

SW4-04 - Shark Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
P20				2.52	0.49	5.86																						
St Dev					8.24	1.08																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW13		27/02/2013		4.86	0.13	6.20	26.8	42	3	37	0.06	0.80																
Section3 SW13		20/03/2013		2.01	0.12	6.04	22.7	13	3	23	0.07	1.00																
Section3 SW13		17/04/2013		3.24	0.41	4.92	22.4	8	3	11	0.03	0.70																
Section3 SW13		21/05/2013		6.11	0.49	6.47	24.3	5	3	9	0.02	0.50																
Section3 SW13		26/06/2013		7.05	0.32	5.61	15.1	4	3	3	0.01	0.35																
Section3 SW13		23/07/2013		4.76	0.59	3.78	16.5	6	3	3	0.01	0.51																
Section3 SW13		20/08/2013		8.84	1.19	7.16	16.5	11	3	18	0.02	0.33																
Section3 SW13		24/09/2013		7.86	3.38	7.15	22.8	9	3	9	0.01	0.39																
Section3 SW13		22/10/2013		7.58	6.32	6.89	26.2	5	3	6	0.02	0.43																
Section3 SW13		27/11/2013		2.77	0.36	4.00	24.2	11	3	31	0.01	0.70																
Upstream Monitoring																												
SW4-03		2/08/2016		8.82	2.99	6.61	16.1	13																				
SW4-03	Flowing	8/09/2016		2.96	0.68	4.28	18.5	0	1	10	0.02	0.97	50	150	50													
SW4-03		7/10/2016		2.02	0.92	6.10	20.1	18																				
SW4-03		3/11/2016		5.18	4.70	7.35	26.0	5	1	2	0.03	0.96	50	50	50													
SW4-03		5/12/2016		8.76	8.65	6.77	28.8	374																				
SW4-03	Tidal	18/01/2017		5.29	13.20	7.48	30.7	4	1	10	0.02	0.40	13	50	50													
SW4-03	Tidal	1/02/2017		2.89	14.90	7.49	29.3	0																				
SW4-03	Tidal	10/03/2017		4.30	16.30	7.60	25.7	2	1	25	0.05	0.10	50	50	50													
SW4-03	Tidal	12/04/2017		0.00	0.16	6.40	21.0	4																				
SW4-03	Tidal. Low flow. U/s and d/s sites connected. Outgoing tide.	3/05/2017		0.00	0.56	4.98	19.2	6	1	44	0.05	1.21	50	210	50													
SW4-03	Weather fine.Upstream and downstream sites connected. Level and flow moderate.	7/06/2017		1.74	0.63	4.28	15.3	1																				
SW4-04	Weather fine.Upstream and downstream sites connected. Low flow, incoming tide therefore SW4-04 is upstream. Water level moderate.	14/07/2017		2.52	0.45	4.67	16.3	2	1	7	0.03	0.61	13	50	50													

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

SW4-04 - Shark Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW4-04		4/08/2016		6.67	1.84	6.07	15.0	173																					
SW4-04		11/11/2016		5.43	7.83	7.81	26.7	8		11	0.02	1.36	50	50	50														
SW4-04		6/01/2017		3.78	13.70	7.17	27.1	40																					
SW4-04		1/03/2017		4.68	15.40	7.60	27.3	8	1	8	0.01	0.40	13	50	50														
SW4-04	Tidal	7/03/2017		4.90	15.80	7.40	26.5	5																					
SW4-04	In-situ measurements taken from bucket sample. Heavy anoxic odour.	6/04/2017		1.77	0.17	6.40	21.8	16	1	23	0.09	1.25	50	50	50														
SW4-03	Mid water level, inflowing tide therefore SW4-03 is downstream. U/s and d/s sites connected. Drizzle	4/05/2017		0.00	0.64	4.65	19.1	3																					
SW4-04	Weather showers. Upstream and downstream sites connected. High water level, outgoing tide.	13/06/2017		5.53	0.19	4.73	16.6	9	1	15	0.03	0.69	13	50	50														
SW4-03	Weather fine. Upstream and downstream connected. Medium flow, incoming tide therefore SW4-03 is downstream. Low water level.	17/07/2017		1.40	0.57	4.46	15.8	7																					
SW4-04	Upstream and downstream sites connected. Outgoing tide, high water level. Very clear water. Weather fine.	9/10/2017		7.47	13.30	7.55	25.5	0	1	4	0.02	0.25	13	50	50														
SW4-03	Connected. Incoming tide, therefore SW4-03 is downstream, moderate water level, low flow.	7/11/2017		1.60	1.35	6.29	24.3	5																					
SW4-04	No safe access to due high risk work activities within sample area.	11/12/2017																											
SW4-04	Upstream and downstream sites connected. No visible flow- slack water. High water level. Weather fine.	3/01/2018		3.81	1.18	7.04	27.7	41																					
SW4-04	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Weather fine.	6/02/2018		1.98	2.47	6.76	24.9	18	1	28	0.07	1.34	13	50	50														
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	7/03/2018		3.72	4.84	7.47	26.1	11																					
SW4-03	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Overcast.	9/05/2018		3.85	5.32	6.97	21.6	19	1	8	0.02	0.56	13	50	50														
SW4-03	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Overcast.	7/06/2018	13:12	6.71	9.03	6.98	16.8	227																					
SW4-04	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Rain.	5/09/2018	10:12	4.45	7.35	6.92	15.2	129	1	61	0.21	0.97	13	50	50														
SW4-04	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Rain.	12/10/2018	14:06	4.57	15.50	7.16	21.8	14																					
SW4-03	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	29/11/2018	11:00	4.15	3.40	7.50	25.6	16	1	8	0.05	1.40	13	50	50														

SW4-04 - Shark Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW4-04	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Overcast.	17/12/2018	10:53	5.09	5.96	7.97	26.8	52																				
SW4-03	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	22/02/2019	12:13	3.95	14.10	7.14	26.1	8	1	15	0.03	0.50	13	50	50													
SW4-03	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	9/03/2019	10:33	3.33	16.00	7.37	25.4	7																				
SW4-04	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	4/04/2019	14:13	5.72	16.90	8.03	24.2	84	1	54	0.05	0.88	13	50	50													
SW4-03	Upstream and downstream sites connected. No visible flow, medium water level. Incoming tide. Overcast.	25/06/2019	11:26	6.58	18.40	7.22	15.6	66																				
SW4-04	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Overcast.	1/08/2019	11:34	6.89	19.50	7.56	16.3	4	1	13	0.02	0.77	13	50	50													
SW4-04	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Overcast.	24/12/2019	14:35	7.11	24.50	7.25	27.7	41																				
SW4-03	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	15/01/2020	10:52	1.07	30.70	7.07	25.5	7	1	10	0.06	0.83	13	50	50													
SW4-04	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Rain.	6/02/2020	14:00	2.94	0.55	6.91	23.1	33																				
SW4-04	Upstream and downstream sites connected. No visible flow, high water level. Outgoing tide. Drizzle.	7/03/2020	10:30	1.81	0.21	5.24	25.1	14	1	12	0.09	1.23	13	50	50													
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/04/2020	9:39	4.31	0.47	6.43	24.5	56																				
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	11/06/2020	12:53	5.34	8.42	6.76	17.7	8	1	10	0.02	0.82	13	50	50													
SW4-03	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	8/08/2020	10:12	10.67	0.23	3.61	13.3	15																				
SW4-04	Upstream and downstream sites connected. Low flow, high water level. Outflowing flood waters. Rain.	16/12/2020	9:46	6.24	0.26	4.83	21.7	26	1	14	0.02	0.58	15	5	50	2.060	0.001	0.0010	0.002	0.002	2.560	0.005	0.250	0.0001	0.003	0.001	0.0005	0.210
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	17/02/2021	10:13	8.47	0.74	7.21	25.2	9																				
SW4-04	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	3/05/2021	11:16	3.20	0.20	5.29	19.9	12	1	15	0.02	0.73	13	50	50	0.650	0.001	0.0010	0.002	0.002	4.090	0.005	0.098	0.0001	0.003	0.001	0.0005	0.130
SW4-04	Upstream and downstream connected. Low flow. Medium water level. Outgoing tide. Overcast.	11/11/2021	9:46	4.62	1.38	4.42	24.5	1	1	11	0.02	0.40	13	50	50	1.750	0.002	0.0010	0.001	0.002	1.880	0.005	0.830	0.0001	0.018	0.002	0.0015	0.820

SW4-04 - Shark Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW4-03	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	4/07/2022	13:18	4.33	0.53	4.70	13.9	10	1	3	0.04	0.33	25	50	50	0.350	0.001	0.0010	0.001	0.002	1.430	0.005	0.350	0.0001	0.003	0.001	0.0005	0.012	
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					14.86	7.44		41	2	23	0.07	1.05	14	50	50	1.970	0.001	0.0010	0.002	0.002	3.358	0.005	0.552	0.0001	0.012	0.001	0.0009	0.692	
P20				2.24	0.54	5.59																							
St Dev					8.06	1.11																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW13		7/02/2013		1.30	0.35	5.52	23.7	27	3	38	0.15	0.40																	
Section3 SW13		28/05/2013		9.84	1.55	7.13	18.5	13	3	16	0.06	0.60																	
Section3 SW13		1/07/2013		9.84	1.55	7.13	18.5	13	3	7	0.03	0.45																	
Section3 SW13		13/11/2013		7.36	7.40	6.24	25.9	62	3	31	0.02	1.20																	
Section3 SW13		17/12/2013		7.36	1.03	6.54	25.7	11	3	8	0.50	0.60																	
Upstream Monitoring																													
SW4-03		4/08/2016		6.97	1.86	5.78	15.2	171																					
SW4-03		11/11/2016		4.68	7.59	7.63	26.6	2	1	7	0.02	0.62	50	50	50														
SW4-03		6/01/2017		2.15	14.30	6.96	27.3	42																					
SW4-03		1/03/2017		4.28	16.40	7.50	27.1	7	1	6	0.02	0.10	13	50	50														
SW4-03	Tidal	7/03/2017		5.55	15.50	7.46	26.5	5																					
SW4-03	Heavy anoxic odour	6/04/2017		0.00	0.15	6.33	21.6	14	1	25	0.08	1.28	50	50	50														
SW4-04	Mid water level, inflowing tide therefore SW4-04 is upstream. U/s and d/s sites connected. Drizzle	4/05/2017		0.00	0.62	5.13	19.1	13																					
SW4-03	Weather showers. Upstream and downstream site connected. High water level, outgoing tide.	13/06/2017		4.38	0.18	4.58	16.8	5	1	11	0.02	0.60	13	50	50														
SW4-04	Weather fine. Upstream and downstream connected. Medium flow, incoming tide therefore SW4-04 is upstream. Low water level.	17/07/2017		0.66	0.54	4.07	15.4	4																					
SW4-03	Upstream and downstream sites connected. Outgoing tide, high water level. Very clear water. Weather fine.	9/10/2017		7.93	13.60	7.52	24.5	0	1	6	0.02	0.31	13	50	50														
SW4-04	Connected. Incoming tide, therefore SW4-04 is upstream. Moderate water level. low flow.	7/11/2017		2.61	2.04	6.85	24.5	4																					

SW4-04 - Shark Creek

Wet Event Monitoring

[illegible]

SW4-04 - Shark Creek

Wet Event Monitoring

[illegible]

SW4-06 - Edwards Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW4-06	Murky water, medium sloping banks	2/08/2016		7.18	6.56	6.53	16.6	6																					
SW4-06	Flowing	8/019/2016		5.94	0.46	6.26	19.8	5	2	12	0.06	0.73	50	50	50														
SW4-06	Tidal	7/10/2016		4.86	3.67	5.93	19.8	33																					
SW4-06	Accurate turbidity reading could not be obtained	3/11/2016		5.40	9.60	7.12	26.4		1	19	0.03	0.90	50	50	50														
SW4-06		5/12/2016		8.79	13.70	6.67	30.8	2																					
SW4-06	Tidal	18/01/2017		8.28	9.77	7.77	31.6	9	1	5	0.02	2.42	13	50	50														
SW4-06	Tidal	1/02/2017		3.53	12.00	7.19	27.5	1																					
SW4-06	Tidal	10/03/2017		7.11	6.16	8.14	23.6	15	1	29	0.02	0.70	50	50	50														
SW4-06	Tidal	12/04/2017		1.97	0.28	6.53	23.4	14																					
SW4-06	Tidal. Low flow. U/s and d/s sites connected. Outgoing tide.	3/05/2017		3.58	3.50	6.98	21.4	32	1	13	0.05	1.41	50	50	50														
SW4-06	Weather fine. Connected. Low flow. Outgoing tide.	7/06/2017		6.82	7.47	6.81		7																					
SW4-05	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW4-05 is downstream. Moderate to high water level.	14/07/2017		3.86	1.14	6.94	17.3	13	1	16	0.09	1.10	13	50	50														
SW4-05	Upstream and downstream sites connected. Outgoing tide, moderate flow. Moderate water level. Weather fine.	7/08/2017		9.43	8.02	7.28	17.7	12																					
SW4-05	Weather fine. U/S and D/S connected. No observed flow. Low water level.	5/09/2017		8.44	14.20	7.10	18.1	9	1	3	0.02	0.47	13	50	50														
SW4-06	Upstream and downstream connected. Outgoing tide, low water level. Overcast.	3/10/2017		6.80	19.70	7.42	21.9	4																					
SW4-06	Upstream and downstream connected. Outgoing tide, low water level.	3/11/2017		5.87	7.31	7.45	26.7	8	1	20	0.02	0.65	13	50	50														
SW4-05	Upstream and downstream connected. Little flow, moderate water level. Incoming tide, therefore SW4-05 is downstream. Weather fine.	7/12/2017		7.05	4.66	7.89	27.8	0																					
SW4-05	Upstream and downstream connected. No visible flow, medium water level. Weather fine. Incoming tide.	17/01/2018		5.73	4.03	7.66	28.0	1	1	10	0.02	0.58	13	50	50														
SW4-06	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Weather fine.	14/02/2018		7.81	13.30	7.54	30.1	1																					
SW4-05	Upstream and downstream sites connected. No visible flow, low water level. Incoming tide. Weather fine.	20/03/2018		4.03	3.28	6.45	25.6	28	1	15	0.02	1.11	13	50	50														
SW4-06	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	11/04/2018		3.20	6.89	5.93	25.4	8																					

Dry Event Monitoring

[illegible]

Dry Event Monitoring

P80 & P20 Values (calculated from baseline and upstream data below)

SW4-06 - Edwards Creek

Dry Event Monitoring

[illegible]

SW4-06 - Edwards Creek

Dry Event Monitoring

[illegible]

SW4-06 - Edwards Creek

Dry Event Monitoring

[illegible]

SW4-06 - Edwards Creek

Dry Event Monitoring

[illegible]

SW4-06 - Edwards Creek

Wet Event Monitoring

[illegible]

SW4-06 - Edwards Creek

Wet Event Monitoring

[illegible]

SW4-06 - Edwards Creek

Wet Event Monitoring

[illegible]

SW4-06 - Edwards Creek

Wet Event Monitoring

[illegible]

SW4-06 - Edwards Creek

Wet Event Monitoring

[illegible]

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW5-02	No access	2/08/2016																											
SW5-02	Doesn't appear to flow from upstream site	5/09/2016		0.86	2.44	6.04	15.8	13	5	24	0.75	4.52	25	50	50														
SW5-02	Dry	10/10/2016																											
SW5-02	Dry	1/11/2016																											
SW5-02	Dry	13/12/2016																											
SW5-02	Dry	18/01/2017																											
SW5-02	Dry	1/02/2017																											
SW5-02	Dry	10/03/2017																											
SW5-02	Dry	12/04/2017																											
SW5-02	Dry	3/05/2017																											
SW5-02	Dry	7/06/2017																											
SW5-02	Dry	14/07/2017																											
SW5-02	Stagnant water with no visible flow. Low water level. Weather fine.	7/08/2017		6.29	4.54	7.45	20.0	70																					
SW5-02	Weather fine. U/S and D/S not connected. No flow observed. Water level low. Cane drain.	6/09/2017		8.98	6.93	8.15	23.8	275	1	81	0.19	3.72	13	50	50														
SW5-02	Dry	3/10/2017																											
SW5-02	Dry	3/11/2017																											
SW5-02	Dry	7/12/2017																											
SW5-02	Dry	17/01/2018																											
SW5-02	Dry	19/02/2018																											
SW5-02	Dry - not sampled. Overcast.	21/03/2018																											
SW5-02	Insufficient water to sample	4/04/2018																											
SW5-02	Upstream and downstream sites not connected. No visible flow, high water level. Overcast.	18/05/2018		2.29	4.01	7.48	15.6	12	1	5	0.11	1.22	25	50	25														
SW5-02	Upstream and downstream sites not connected. No visible flow, high water level. Weather fine.	14/06/2018	10:32	3.94	2.08	6.87	15.4	13																					
SW5-02	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	19/07/2018	10:21	3.43	4.45	6.76	13.1	12	1	5	0.08	0.62	30	250	250														
SW5-02	Upstream and downstream sites not connected. No visible flow, low water level. Slight dust layer. Weather fine.	8/08/2018	10:03	5.27	5.64	7.40	12.0	15																					
SW5-02	Upstream and downstream sites not connected. No visible flow, medium water level. Red algae and surface bacteria layer present. Weather fine.	20/09/2018	9:40	11.01	6.51	6.67	22.0	22	3	9	0.07	1.03	30	250	250														

SW5-02 Yaegl Wetland

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

SW5-02 Yaegl Wetland

Dry Event Monitoring

[illegible]

Wet Event Monitoring

		In-situ (Type A) Parameters							Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Downstream Monitoring																												
SW5-02	No Access	5/08/2016																										
SW5-02	Dry	11/11/2016																										
SW5-02	Dry	6/01/2017																										
SW5-02	Dry	1/03/2017																										
SW5-02	Dry	6/03/2017																										
SW5-02	Site access blocked by fallen tree	6/04/2017																										
SW5-02	Dry	4/05/2017																										
SW5-02	Weather showers. Upstream and downstream sites not connected. Water level high.	13/06/2017		5.02	0.22	6.89	19.4	316	1	75	0.15	1.11	13	50	50													
SW5-02	Dry	17/07/2017																										
SW5-02	Upstream and downstream sites not connected. Very slight flow, low water level. Overcast.	7/10/2017		3.85	3.68	6.95	22.9	71	1	74	0.04	3.34	13	50	50													
SW5-02	Not connected. Low water level, no flow.	7/11/2017		0.82	1.25	6.46	28.3	493																				
SW5-02	Upstream and downstream sites not conencted. No visible flow, low water level. Weather, fine.	2/12/2017		2.98	4.16	7.62	27.4	183	1	64	0.04	1.33	13	50	50													
SW5-02	Upstream and downstream sites were not connected. Moderate water level. Weather fine.	3/01/2018		3.87	0.51	6.76	31.2	327																				
SW5-02	Dry, not sampled. Overcast.	1/02/2018																										
SW5-02	No wet weather access to site, no safe pullover area off highway.	7/03/2018																										
SW5-02	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	19/04/2018		0.00	5.70	7.60	21.8	14	2	9	0.15	2.43	30	250	250													
SW5-02	Upstream and downstream sites not connected. No visible flow, high water level. Weather fine.	10/05/2018		1.93	1.06	7.43	19.0	107																				
SW5-02	Upstream and downstream sites not connected, no visible flow, medium water level. Overcast.	6/06/2018	15:28	3.41	8.83	7.39	16.8	92	4	208	0.45	1.12	30	250	250													
SW5-02	Upstream and downstream sites not connected. Very low flow, medium water level. Drizzle.	5/07/2018	10:10	2.15	2.35	6.57	17.9	48																				
SW5-02	Upstream and downstream sites not connected. No visible flow, low water level. Brown algae present. Weather fine.	25/08/2018	13:25	12.77	12.80	7.37	21.8	87	2	18	0.12	1.90	30	250	250													
SW5-02	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	5/09/2018	16:30	5.23	1.11	6.02	19.5	469																				
SW5-02	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	11/10/2018	14:04	3.09	4.03	7.49	23.3	94	1	58	0.10	1.99	13	50	50													
SW5-02	No visible flow, very low water level. Outgoing tide. Overcast.	19/11/2018	12:56	7.89	1.66	8.70	25.8	31																				
SW5-02	No visible flow, low water level. Overcast.	18/12/2018	9:53	2.39	0.82	7.11	23.9	145	1	61	0.11	0.58	30	250	250													
SW5-02	Dry, not sampled.	11/02/2019	10:31																									

Wet Event Monitoring

		In-situ (Type A) Parameters							Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW5-02	No visible flow, very low water level. Weather fine.	9/03/2019	13:55	8.94	1.17	8.36	32.0	101	1	94	0.10	1.37	13	50	50														
SW5-02	Insufficient water to sample.	4/04/2019	13:13																										
SW5-02	Monitoring ceased in May 2019																												
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					1.48	7.41		800	3	239	0.34	2.37	50	250	250	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
P20				1.32	0.37	5.86																							
St Dev					0.85	1.28																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW24		5/02/2013		0.63	0.25	6.21	28.4	36	3	23	0.22	0.50																	
Section3 SW24		27/05/2013		3.39	0.90	5.36	19.4	13	3	65	0.20	1.70																	
Section3 SW24		1/07/2013		7.56	0.42	5.99	16.7	55	3	18	0.32	1.30																	
Section3 SW24		13/11/2013		3.31	2.02	3.11	24.0	7	3	6	0.08	3.60																	
Upstream Monitoring																													
SW5-01		5/08/2016		4.18	0.71	6.71	16.7	89																					
SW5-01		11/11/2016		7.46	0.01	8.06	25.2	226	2	60	0.03	1.49	50	50	50														
SW5-01	Dry	6/01/2017																											
SW5-01	Turbid stormwater run-off observed in catchment. Turbidity reading recorded as >800 NTU.	1/03/2017		0.64	0.44	6.90	25.2	800	1	470	0.26	1.60	13	50	50														
SW5-01	Low water level. Accurate DO reading could not be obtained. Upstream and downstream sites not connected.	6/03/2017			2.15	6.43	26.4	788																					
SW5-01	High flow. No connection to d/s site.	6/04/2017		8.01	0.15	6.36	22.7	7	1	181	0.44	2.82	50	50	50														
SW5-01	Dry	4/05/2017																											
SW5-01	Dry	13/06/2017																											
SW5-01	Dry	17/07/2017																											
SW5-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast	7/10/2017		3.45	3.07	4.31	21.4	24	1	12	0.02	2.26	13	50	50														
SW5-01	Dry	7/11/2017																											
SW5-01	Dry	2/12/2017																											
SW5-01	Dry. Weather fine.	3/01/2018																											

SW5-02 Yaegl Wetland

Wet Event Monitoring

[illegible]

SW5-04 Unnamed tributary of James Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW5-04		2/08/2016		10.28	13.90	7.43	15.9	70																					
SW5-04		5/09/2016		2.57	3.79	6.64	18.2	78	2	29	0.12	0.76	25	50	50														
SW5-04		10/10/2016		9.07	5.47	6.38	18.3	524																					
SW5-04		1/11/2016		0.82	20.60	6.79	21.8	58	4	20	0.08	11.00	25	50	50														
SW5-04		13/12/2016		6.31	29.10	7.49	25.9	3																					
SW5-04	Very low water level - stagnant, no flow and not connected with SW5-03. Accurate turbidity reading could not be obtained.	18/01/2017		0.20	19.80	6.54	28.9		1	110	2.84	16.40	13	50	50														
SW5-04	Very low water level - stagnant, no flow and not connected with SW5-03.	1/02/2017		1.37	22.60	6.93	26.2	462																					
SW5-04	Stagnant, no flow. No connection between upstream and downstream sites. Foul odour.	10/03/2017		3.77	22.40	6.75	24.7	70	1	85	0.81	5.80	50	330	50														
SW5-04	Stagnant, no visible flow. No connection between upstream and downstream monitoring site.	12/04/2017		0.00	0.39	5.66	21.0	29																					
SW5-04	Stagnant, no flow. Not connected to SW5-03.	3/05/2017		0.00	2.61	6.78	20.6	135	1	42	0.42	3.34	50	210	50														
SW5-04	Weather fine. Not connected. Low water level. Stagnant.	7/06/2017		0.00	1.55	6.55		79																					
SW5-04	Weather fine. Not connected. Low water level. Stagnant.	14/07/2017		0.35	1.09	6.56	16.7	41	1	16	0.21	1.70	13	50	50														
SW5-04	No connection between upstream and downstream sites. Stagnant water with no visible flow. Low water level. Weather fine.	7/08/2017		0.42	1.15	6.54	15.6	63																					
SW5-04	Weather fine. U/S and D/S not connected. No flow observed. Water level low.	6/09/2017		3.09	13.50	6.71	20.7	158	1	73	0.33	9.79	13	50	50														
SW5-04	Upstream and downstream connected. Low water level. Soil binder recently applied. Shallow site - unable to obtain DO and turbidity reading. Overcast.	3/10/2017			8.47	7.72	21.1																						
SW5-04	Upstream and downstream not connected. No flow, low water level and stagnant.	3/11/2017		3.96	5.22	6.82	25.3	63	1	63	0.37	3.21	13	50	50														
SW5-04	No connection between upstream and downstream sites. No visible flow, low water level. Weather fine.	7/12/2017		8.26	12.60	7.25	27.9	110																					
SW5-04	Upstream and downstream not connected. No visible flow, low water level. Weather fine.	17/01/2018		10.50	10.60	7.40	27.2	42	1	29	0.19	5.68	13	50	50														
SW5-04	Upstream and downstream sites not connected. No visible flow, medium water level. Surface scum lighter than upstream site. Weather fine.	19/02/2018		5.90	18.30	7.95	29.0	54																					
SW5-04	Upstream and downstream sites connected. Very low flow, medium water level. Slight scum layer. Overcast.	21/03/2018		4.48	14.70	6.84	23.3	24	2	46	0.40	8.74	25	50	50														

SW5-04 Unnamed tributary of James Creek

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

SW5-04 Unnamed tributary of James Creek

Dry Event Monitoring

[illegible]

SW5-04 Unnamed tributary of James Creek

Dry Event Monitoring

[illegible]

SW5-04 Unnamed tributary of James Creek

Dry Event Monitoring

[illegible]

SW5-04 Unnamed tributary of James Creek

Dry Event Monitoring

[illegible]

SW5-04 Unnamed tributary of James Creek

Wet Event Monitoring

[illegible]

SW5-04 Unnamed tributary of James Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW5-04	Upstream and downstream sites connected. No visible flow, medium water level. Brown algae present. Overcast.	5/09/2018	15:51	8.00	10.60	6.30	18.3	101																				
SW5-04	Unable to determine if upstream and downstream sites were connected. No visible flow, very low water level. Overcast.	11/10/2018	13:19	8.08	0.05	7.49	21.0	250	1	64	0.18	11.40	13	50	50													
SW5-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	19/11/2018	12:37	3.75	7.86	7.65	23.2	287																				
SW5-04	Upstream and downstream sites connected. No visible flow, medium water level. Algae present. Overcast.	18/12/2018	9:01	1.58	15.10	6.66	24.5	27	1	9	0.30	2.92	30	250	250													
SW5-04	Upstream and downstream sites connected. No visible flow, medium water level. Slight surface bacteria. Overcast.	11/02/2019	10:57	4.54	24.70	7.44	25.8	22																				
SW5-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Incoming tide. Weather fine.	9/03/2019	13:46	9.17	14.80	8.77	31.2	156	1	42	0.30	5.17	13	50	50													
SW5-04	Unable to determine if upstream and downstream sites were connected. No visible flow, very low water level. Outgoing tide. Weather fine.	4/04/2019	13:01	9.43	22.70	7.36	26.0	120																				
SW5-04	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Drizzle.	24/06/2019	12:48	5.58	32.50	6.63	12.6	0	1	2	0.07	0.45	30	100	50													
SW5-04	Upstream and downstream sites connected. No visible flow, medium water level. Outgoing tide. Overcast.	1/08/2019	9:41	0.00	28.10	6.95	15.0	4																				
SW5-04	Upstream and downstream sites connected. Very low flow, low water level. Outgoing tide. Rain.	24/12/2019	10:33	0.34	32.30	6.95	24.0	25																				
SW5-04	Upstream and downstream sites not connected. No visible flow, low water level. Outgoing tide. Weather fine.	17/01/2020	12:01	3.14	34.10	6.83	24.4	26	1	8	0.27	1.67	50	100	50													
SW5-04	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Orange colouration. Overcast.	7/02/2020	11:12	0.00	3.85	6.34	23.1	104	3	37	0.22	2.40	30	380	50													
SW5-04	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Drizzle.	7/03/2020	12:08	0.23	0.71	5.97	24.6	53																				
SW5-04	Upstream and downstream sites connected. No visible flow, low water level. Outgoing tide. Weather fine.	11/04/2020	8:30	1.10	1.23	6.49	20.1	140	5	28	0.26	1.95	30	300	50													
SW5-04	Upstream and downstream sites connected. Very low flow, medium water level. Rain.	10/06/2020	12:04	3.82	16.10	6.63	17.5	39																				
SW5-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	8/08/2020	9:26	3.22	2.59	6.08	14.1	81																				
SW5-03	Upstream and downstream sites connected. Medium flow, very high water level. Incoming tide. Overcast.	16/12/2020	9:39	5.73	16.80	6.66	24.1	10	2	6	0.10	0.54	30	100	50	0.058	0.001	0.0005	0.001	0.001	0.110	0.001	0.278	0.0003	0.001	0.001	0.0050	0.008

SW5-04 Unnamed tributary of James Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW5-04	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	3/02/2021	10:01	1.42	1.61	6.70	22.9	145																				
SW5-04	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Rain.	6/05/2021	9:07	5.48	0.28	6.82	16.2	77	1	254	0.32	2.00	15	50	50	8.060	0.003	0.0010	0.006	0.007	13.100	0.005	0.300	0.0001	0.003	0.001	0.0005	0.035
SW5-04	Upstream and downstream connected. No visible flow. Medium water level. Outgoing tide. Overcast.	11/11/2021	11:07	2.27	4.40	7.57	24.6	119	1	23	0.16	2.16	13	50	50	0.690	0.002	0.0010	0.001	0.002	8.670	0.005	0.740	0.0001	0.008	0.002	0.0015	0.025
SW5-04	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Overcast.	23/05/2022	7:53	2.56	0.17	5.42	16.6	21	1	14	0.21	1.14	30	100	50	0.624	0.001	0.0005	0.001	0.001	4.051	0.001	0.145	0.0003	0.001	0.001	0.0005	0.004
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					18.10	6.97		116	5	64	0.31	5.25	30	250	232	1.700	0.002	0.0010	0.002	0.002	4.606	0.005	0.349	0.0003	0.004	0.001	0.0029	0.010
P20				0.54	1.64	6.32																						
St Dev					10.95	1.13																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW15		5/02/2013		2.50	0.13	6.31	29.2	39	3	12	0.16	0.50																
Section3 SW15		28/05/2013		2.64	4.06	6.50	18.6	22	3	120	0.12	7.90																
Section3 SW15		1/07/2013		2.64	4.06	6.50	18.6	22	3	34	0.10	2.50																
Section3 SW15		13/11/2013		5.09	0.01	3.21	30.9	11	6	16	0.01	15.00																
Upstream Monitoring																												
SW5-03	High water level, very turbid	5/08/2016		6.06	1.24	6.78	14.4	134																				
SW5-03	Dry	11/11/2016																										
SW5-03	Dry	6/01/2017																										
SW5-03	Dry	1/03/2017																										
SW5-03	Dry	6/03/2017																										
SW5-03	No access after heavy rain.	6/04/2017																										
SW5-03	Dry	4/05/2017																										
SW5-03	Dry	13/06/2017																										
SW5-03	Dry	17/07/2017																										
SW5-03	Upstream and downstream sites connected. No observable flow, medium water level. Overcast, drizzle.	7/10/2017		7.16	19.80	7.28	23.5	71	1	23	0.12	12.30	13	50	50													

SW5-04 Unnamed tributary of James Creek

Wet Event Monitoring

[illegible]

SW5-04 Unnamed tributary of James Creek

Wet Event Monitoring

[illegible]

SW5-06 - Clarence River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW5-06		2/08/2016		7.80	24.00	8.37	17.8	132																					
SW5-06		5/09/2016		7.72	6.28	7.26	18.8	38	4	25	0.06	0.40	25	50	50														
SW5-06		10/10/2016		7.33	16.00	7.57	21.3	13																					
SW5-06		1/11/2016		6.35	25.10	7.57	24.0	10	4	8	0.03	0.32	25	50	50														
SW5-06		13/12/2016		6.31	29.10	7.49	25.9	3																					
SW5-06	Tidal	18/01/2017		5.49	22.60	7.65	29.3	6	1	5	0.02	0.36	13	50	50														
SW5-05	Tidal - incoming therefore SW5-05 is downstream.	1/02/2017		4.02	24.70	8.06	28.3	8																					
SW5-06	Very high tide	10/03/2017		6.36	36.40	7.85	25.0	7	1	78	0.03	0.25	50	50	50														
SW5-06	High tide	12/04/2017		2.52	6.95	6.95	22.3	17																					
SW5-06	Tidal. Low flow. U/s and d/s sites connected. Outgoing tide.	3/05/2017		8.62	11.60	7.59	21.3	10	1	30	0.04	1.00	50	50	50														
SW5-06	Weather fine. Upstream and downstream sites connected. Mid water level, outgoing tide.	7/06/2017		5.98	22.00	8.20		12																					
SW5-05	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-05 is downstream. Moderate water level.	14/07/2017		4.63	9.11	7.52	17.6	5	1	9	0.08	0.83	13	50	50														
SW5-05	Upstream and downstream sites connected. Outgoing tide, low flow. Moderate water level. Weather fine.	7/08/2017		8.66	23.90	8.13	17.9	5																					
SW5-06	Weather fine. U/S and D/S connected. Outgoing tide. Water level high. Wave action likely to affect NTU.	6/09/2017		9.17	31.40	7.88	19.4	22	1	117	0.05	0.47	13	50	50														
SW5-06	Upstream and downstream connected. Outgoing tide, low water level. Wave action causing increased turbidity. Overcast.	3/10/2017		6.20	33.40	7.61	21.8	37																					
SW5-06	Upstream and downstream connected. Outgoing tide. Slight flow, high water level.	3/11/2017		4.89	27.00	8.05	25.0	0	1	7	0.02	0.43	13	50	50														
SW5-05	Upstream and downstream connected. Moderate flow, high water level. Incoming tide, therefore SW5-05 is downstream. Weather fine.	7/12/2017		5.55	14.30	7.87	26.9	1																					
SW5-05	Upstream and downstream connected. Moderate flow, medium water level. Weather fine. Incoming tide.	17/01/2018		4.21	30.40	7.71	25.2	0	1	22	0.02	0.34	13	50	50														
SW5-06	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	19/02/2018		6.41	30.90	8.04	29.5	21																					
SW5-05	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Wave action stirring up bottom sediment at sample point (shallow bank). Overcast.	21/03/2018		6.38	0.88	7.35	26.4	421	1	36	0.10	0.49	25	50	50														

SW5-06 - Clarence River

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

SW5-06 - Clarence River

Dry Event Monitoring

[illegible]

SW5-06 - Clarence River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW16		28/02/2013		6.75	0.09	6.73	25.1	87	3	70	0.10	0.80																	
Section3 SW16		20/03/2013		7.46	2.76	6.92	23.3	21	3	33	0.01	0.80																	
Section3 SW16		16/04/2013		8.58	0.00	6.93	24.4	25	3	25	0.07	0.50																	
Section3 SW16		21/05/2013		9.08	18.18	6.71	17.4	7	3	18	0.04	0.30																	
Section3 SW16		26/06/2013		10.05	4.07	6.77	15.9	24	3	30	0.06	0.51																	
Section3 SW16		23/07/2013		9.05	6.85	7.02	15.7	114	3	140	0.15	0.45																	
Section3 SW16		20/08/2013		8.72	19.46	7.60	16.6	203	3	210	0.28	0.96																	
Section3 SW16		24/09/2013		8.34	16.36	7.12	22.0	10	3	21	0.01	0.25																	
Section3 SW16		22/10/2013		8.46	19.18	6.99	22.6	16	3	78	0.01	0.42																	
Section3 SW16		27/11/2013		7.49	11.18	6.44	25.9	14	3	18	0.01	0.50																	
Section3 SW16		17/12/2013		7.33	16.83	6.80	24.8	8	3	11	1.25	0.10																	
Upstream Monitoring																													
SW5-05		2/08/2016		8.17	24.90	8.32	18.3	47																					
SW5-05		5/09/2016		7.89	6.78	7.19	19.1	45	5	22	0.05	0.37	25	50	50														
SW5-05		10/10/2016		7.23	16.10	7.52	21.4	9																					
SW5-05		1/11/2016		6.50	25.00	7.65	24.2	9	5	15	0.03	0.30	25	50	50														
SW5-05		13/12/2016		5.36	32.20	7.63	25.3	4																					
SW5-05	Tidal	18/01/2017		6.30	22.90	7.34	29.1	16	1	5	0.02	0.44	13	50	50														
SW5-06	Tidal - incoming therefore SW5-06 is upstream.	1/02/2017		7.16	25.30	8.05	29.1	4																					
SW5-05	Very high tide	10/03/2017		6.35	42.00	8.03	25.0	21	2	41	0.08	0.25	50	50	50														
SW5-05	High tide	12/04/2017		3.07	5.80	6.91	22.5	40																					
SW5-05	Tidal. Low flow. U/s and d/s sites connected. Outgoing tide.	3/05/2017		3.76	11.20	7.56	21.4	61	1	306	0.23	1.46	50	50	50														
SW5-05	Weather fine. Connected. Mid-tide outgoing. Could not obtain accurate turbidity measurement due to turbid water close to shore.	7/06/2017		7.36	21.70	8.04	18.3																						
SW5-06	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-06 is upstream. Moderate water level.	14/07/2017		4.54	11.50	7.57	17.5	5	1	14	0.09	0.91	13	50	50														
SW5-06	Upstream and downstream sites connected. Outgoing tide, low flow. Moderate water level. Weather fine.	7/08/2017		7.96	25.20	8.24	17.7	4																					
SW5-05	Weather fine. U/S and D/S connected. Outgoing tide. Water level high.	6/09/2017		7.37	31.10	7.79	18.6	6	1	10	0.02	0.24	13	50	50														

SW5-06 - Clarence River

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

SW5-06 - Clarence River

Dry Event Monitoring

[illegible]

SW5-06 - Clarence River

Wet Event Monitoring

[illegible]

SW5-06 - Clarence River

Wet Event Monitoring

[illegible]

Wet Event Monitoring

[illegible]

SW5-06 - Clarence River

Wet Event Monitoring

[illegible]

SW5-06 - Clarence River

Wet Event Monitoring

[illegible]

SW5-08 - Serpentine Channel

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW5-08		2/08/2016		7.63	30.90	8.18	18.1	7																					
SW5-08		5/09/2016		6.36	10.60	7.17	19.3	21	5	16	0.08	0.55	25	50	50														
SW5-08		10/10/2016		4.50	28.90	7.15	21.2	9																					
SW5-08		1/11/2016		4.79	33.80	7.32	24.3	12	4	2	0.06	0.38	25	50	50														
SW5-08		13/12/2016		4.45	33.80	7.52	25.8	14																					
SW5-08	Tidal	18/01/2017		4.29	33.00	7.01	28.4	29	1	24	0.03	0.45	13	50	50														
SW5-07	Tidal - incoming therefore SW5-07 is downstream.	1/02/2017		2.83	36.50	7.86	28.1	11																					
SW5-08	Very high tide	10/03/2017		5.40	40.20	7.80	24.2	10	1	23	0.11	0.25	50	50	50														
SW5-08	High tide	12/04/2017		3.14	3.83	7.12	22.9	26																					
SW5-08	Tidal. Low flow, outgoing tide. U/s and d/s sites connected.	3/05/2017		3.81	20.50	7.39	20.3	5	1	15	0.03	0.62	50	50	50														
SW5-08	Weather fine. Connected. Mid water level, outgoing tide.	7/06/2017		6.31	29.10	7.66		8																					
SW5-07	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-07 is downstream. Water level moderate.	14/07/2017		5.89	20.10	7.58	15.9	5	1	11	0.08	0.48	13	50	50														
SW5-08	Upstream and downstream sites connected. Outgoing tide, low flow. Moderate water level. Weather fine.	7/08/2017		6.70	30.10	7.77	17.9	10																					
SW5-08	Weather fine. U/S and D/S connected. Outgoing tide. Water level high.	6/09/2017		5.77	39.10	7.52	19.3	7	1	11	0.02	0.26	13	50	50														
SW5-08	Upstream and downstream connected. Outgoing tide, low water level. Showers.	3/10/2017		3.08	41.60	7.20	21.2	9																					
SW5-07	Upstream and downstream connected. Incoming tide, therefore SW5-07 is upstream. High water level, slight flow.	3/11/2017		3.45	25.50	7.65	25.9	27	1	21	0.03	0.38	13	50	50														
SW5-07	Upstream and downstream connected. Low flow, moderate water level. Incoming tide, therefore SW5-07 is downstream Weather fine.	7/12/2017		4.46	25.70	7.50	25.9	14																					
SW5-07	Upstream and downstream connected. Moderate flow, medium water level. Weather fine. Incoming tide.	17/01/2018		3.85	28.30	7.37	25.4	3	1	15	0.02	0.30	13	50	50														
SW5-08	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	19/02/2018		4.75	32.60	7.57	29.5	60																					
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	21/03/2018		4.05	11.20	7.16	26.7	42	2	31	0.12	0.64	25	50	50														
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	4/04/2018		8.17	17.20	7.48	25.5	33																					

SW5-08 - Serpentine Channel

Dry Event Monitoring

[illegible]

SW5-08 - Serpentine Channel

Dry Event Monitoring

[illegible]

SW5-08 - Serpentine Channel

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW17		28/02/2013		4.15	0.14	6.44	25.3	38	3	25	0.17	1.20																
Section3 SW17		20/03/2013		6.25	2.15	6.92	22.0	24	3	14	0.03	1.10																
Section3 SW17		16/04/2013		4.42	1.16	6.67	21.0	58	3	28	0.25	1.00																
Section3 SW17		21/05/2013		8.96	24.00	6.98	17.0	7	3	31	0.05	0.40																
Section3 SW17		25/06/2013		9.44	15.78	7.14	15.4	10	3	17	0.05	0.43																
Section3 SW17		22/07/2013		9.39	11.33	7.40	16.7	13	3	19	0.06	1.10																
Section3 SW17		19/08/2013		8.74	22.30	7.43	19.1	11	3	48	0.05	5.30																
Section3 SW17		23/09/2013		6.81	27.10	7.11	22.8	9	3	23	0.04	0.33																
Section3 SW17		21/10/2013		7.00	30.30	7.58	24.5	9	3	26	0.03	0.32																
Section3 SW17		25/11/2013		6.56	14.03	7.23	28.5	10	3	25	0.04	1.70																
Section3 SW17		16/12/2013		6.15	18.89	7.02	27.5	13	3	12	1.25	0.60																
Upstream Monitoring																												
SW5-07	Looked clean and healthy. Photos taken.	3/08/2016		8.76	32.60	7.63	18.1	7																				
SW5-07		5/09/2016		6.36	10.40	7.21	19.7	16	12	14	0.08	0.55	25	50	50													
SW5-07		10/10/2016		4.39	28.50	7.15	21.2	8																				
SW5-07		1/11/2016		4.81	33.90	7.31	24.5	17	5	3	0.07	0.40	25	50	50													
SW5-07		13/12/2016		3.65	33.90	7.50	26.1	8																				
SW5-07	Tidal	18/01/2017		3.91	33.10	7.02	28.0	45	1	27	0.05	0.52	13	50	50													
SW5-08	Tidal - incoming therefore SW5-08 is upstream.	1/02/2017		3.63	36.60	7.87	28.1	15																				
SW5-07	Very high tide	10/03/2017		6.03	40.10	7.84	24.7	8	1	22	0.08	0.25	50	50	50													
SW5-07	High tide	12/04/2017		2.95	3.48	7.14	22.9	29																				
SW5-07	Tidal. Low flow. Outgoing tide. U/s and d/s sites connected.	3/05/2017		4.24	20.30	7.41	20.5	6	1	17	0.04	1.04	50	50	50													
SW5-07	Weather fine. Connected. Mid water level, outgoing tide.	7/06/2017		5.37	29.10	7.63	16.9	6																				
SW5-08	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-08 is upstream. Water level moderate.	14/07/2017		4.25	20.30	7.52	15.6	6	1	15	0.11	0.75	13	50	50													
SW5-07	Upstream and downstream sites connected. Outgoing tide, low flow. Moderate water level. Weather fine.	7/08/2017		8.93	29.80	7.77	18.2	9																				
SW5-07	Weather fine. U/S and D/S connected. Outgoing tide. Water level high.	6/09/2017		5.82	39.30	7.48	19.7	10	1	16	0.02	0.28	13	50	50													

Dry Event Monitoring

[illegible]

SW5-08 - Serpentine Channel

Dry Event Monitoring

[illegible]

SW5-08 - Serpentine Channel

Dry Event Monitoring

[illegible]

SW5-08 - Serpentine Channel

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW5-08	High water level, turbid water	5/08/2016		6.78	2.17	6.31	13.9	163																					
SW5-08	Data not collected - technical error	10/11/2016																											
SW5-08		6/01/2017		4.44	35.70	7.34	26.8	37																					
SW5-08		1/03/2017		3.87	20.70	7.07	24.6	66	5	25	0.19	2.90	13	50	50														
SW5-08	Low tide, gentle outflow. Upstream and downstream sites connected.	6/03/2017		2.87	25.60	7.27	26.8	23																					
SW5-08	Moderate flow. Outgoing tide.	6/04/2017		4.93	0.51	6.68	20.3	45	1	28	0.26	1.12	50	50	50														
SW5-07	Low water level, low flow. Incoming tide therefore SW5-07 is downstream. U/s and d/s sites connected. Drizzle.	4/05/2017		4.62	19.40	7.50	20.0	5																					
SW5-08	Weather showers. Connected. High tide, outgoing.	13/06/2017		6.33	0.23	6.60	16.1	99	1	24	0.21	0.68	13	50	50														
SW5-07	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-07 is downstream. Water level low.	17/07/2017		3.85	16.10	7.51	16.5	10																					
SW5-08	Upstream and downstream sites connected. Outgoing tide, steady flow, high water level. Overcast.	7/10/2017		4.51	42.20	7.61	23.6	19	1	19	0.02	0.36	13	50	50														
SW5-07	Connected. Incoming tide, therefore SW5-07 is downstream. Moderate water level, low flow.	7/11/2017		3.28	24.70	7.58	24.2	26																					
SW5-08	Upstream and downstream sites connected. Low flow, low water level. Ongoing tide. Weather, fine.	1/12/2017		3.26	27.00	7.40	26.7	17	1	18	0.02	1.18	13	50	50														
SW5-07	Upstream and downstream sites connected. Incoming tide, therefore SW5-07 is downstream. Slight flow, high water level. Weather fine.	3/01/2018		2.82	8.93	6.85	25.1	145																					
SW5-07	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Overcast.	1/02/2018		4.27	32.40	7.48	26.2	42	1	21	0.07	0.27	25	50	50														
SW5-08	Upstream and downstream sites connected. Low flow, low water level. Slack tide. Overcast.	7/03/2018		4.28	19.30	7.27	24.5	80																					
SW5-07	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Weather fine.	19/04/2018		4.16	28.30	7.57	23.3	19	1	16	0.07	0.37	30	250	250														
SW5-08	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	10/05/2018		3.15	23.80	7.53	20.5	46																					
SW5-07	Upstream and downstream sites connected, low flow, medium water level, incoming tide. Overcast.	6/06/2018	12:46	5.08	39.50	7.32	16.8	55	1	16	0.04	0.22	30	250	250														
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	5/07/2018	10:59	4.11	29.60	7.12	17.1	20																					
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	25/08/2018	11:13	7.55	37.00	7.80	17.0	45	1	16	0.09	0.45	30	250	250														

SW5-08 - Serpentine Channel

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW5-07	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Overcast.	5/09/2018	15:30	5.55	9.84	6.75	17.9	301																				
SW5-08	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Overcast.	11/10/2018	12:22	4.49	41.90	7.72	22.0	13	1	11	0.04	0.23	13	50	50													
SW5-08	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	19/11/2018	11:54	2.65	26.80	7.30	25.3	29																				
SW5-08	Upstream and downstream sites connected. High flow, medium water level. Outgoing tide. Weather fine.	18/12/2018	10:47	4.82	8.28	7.38	26.1	20	2	9	0.06	0.33	30	250	250													
SW5-07	Upstream and downstream sites connected. High flow, medium water level. Incoming tide. Weather fine.	11/02/2019	12:04	3.78	39.30	7.59	28.0	47																				
SW5-07	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	9/03/2019	12:44	7.21	40.90	8.10	26.6	29	1	11	0.05	0.39	13	50	50													
SW5-08	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	4/04/2019	12:13	5.62	39.50	8.18	23.3	50																				
SW5-08	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Rain.	24/06/2019	13:48	7.63	45.40	7.49	15.2	2	1	8	0.01	0.27	30	100	50													
SW5-08	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	1/08/2019	10:23	4.50	37.60	7.61	17.0	4																				
SW5-08	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Drizzle.	24/12/2019	10:56	4.70	41.40	7.62	26.9	18																				
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Rain.	17/01/2020	12:44	5.34	41.40	7.58	25.8	67	1	101	0.20	0.58	50	100	50													
SW5-08	Upstream and downstream sites connected. High flow, very high water level. Outgoing tide. Overcast.	7/02/2020	11:51	5.26	7.32	6.99	23.7	114	10	44	0.26	3.37	30	100	50													
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Drizzle.	7/03/2020	12:36	2.30	3.68	8.45	26.5	57																				
SW5-07	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	11/04/2020	9:24	4.71	6.71	7.02	21.6	98	4	41	0.18	0.87	30	220	50													
SW5-07	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Drizzle.	10/06/2020	12:57	4.55	33.60	7.19	17.4	39																				
SW5-07	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	8/08/2020	10:19	5.55	23.20	7.19	16.9	29																				
SW5-07	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	16/12/2020	10:51	4.32	9.81	6.80	24.9	44	2	23	0.20	0.71	30	100	50	0.357	0.001	0.0005	0.001	0.001	0.289	0.001	0.204	0.0003	0.001	0.001	0.0050	0.002
SW5-07	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Weather fine.	3/02/2021	10:45	8.73	11.70	7.58	26.3	45																				
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Rain.	6/05/2021	9:37	7.04	3.13	7.20	16.2	128	1	55	0.20	0.87	15	50	50	6.920	0.001	0.0010	0.004	0.039	4.150	0.005	0.140	0.0001	0.003	0.001	0.0005	0.180

SW5-08 - Serpentine Channel

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW5-07	Upstream and downstream connected. Medium flow. Medium water level. Incoming tide. Drizzle.	11/11/2021	12:25	4.29	26.50	8.02	25.8	19	1	22	0.02	0.36	13	50	50	0.800	0.002	0.0010	0.001	0.002	0.790	0.005	0.160	0.0001	0.008	0.002	0.0015	0.660	
SW5-08	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	23/05/2022	8:41	5.88	0.32	6.50	17.2	83	3	64	0.19	0.72	30	100	50	1.160	0.001	0.0005	0.001	0.002	1.622	0.001	0.093	0.0003	0.002	0.001	0.0005	0.007	
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					39.04	7.63		93	3	40	0.20	1.09	30	100	50	3.837	0.002	0.0010	0.003	0.004	3.137	0.005	0.163	0.0003	0.005	0.001	0.0029	0.060	
P20				3.60	7.32	6.92																							
St Dev					14.71	0.46																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW17		5/02/2013		1.90	0.51	6.57	27.8	20	3	62	0.19	1.10																	
Section3 SW17		28/05/2013		8.80	22.40	7.32	17.9	6	3	16	0.05	0.50																	
Section3 SW17		2/07/2013		7.65	0.76	6.87	17.1	166	3	44	0.35	1.60																	
Section3 SW17		12/11/2013		5.55	22.10	6.84	26.0	38	3	24	0.07	1.80																	
Upstream Monitoring																													
SW5-07	High water level, turbid water	5/08/2016		4.16	2.28	6.26	14.1	165																					
SW5-07		11/11/2016		3.65	33.60	7.58	26.7	6	1	39	0.07	0.60	50	50	50														
SW5-07		6/01/2017		4.08	35.90	7.30	26.8	39																					
SW5-07		1/03/2017		3.70	24.10	7.08	24.5	60	1	26	0.13	2.50	13	50	50														
SW5-07	Low tide, gentle outflow. Upstream and downstream sites connected.	6/03/2017		3.24	28.60	7.26	27.0	24																					
SW5-07	Moderate flow. Outflow from cane drain adjacent to site. Samples taken outside of mixing zone as much as possible.	6/04/2017		3.42	0.63	6.80	20.9	55	1	40	0.19	1.09	50	50	50														
SW5-08	Low water level, low flow. Incoming tide therefore SW5-08 is upstream. U/s and d/s sites connected. Drizzle.	4/05/2017		4.54	20.40	7.33	20.1	6																					
SW5-07	Weather showers. Connected. High tide, outgoing.	13/06/2017		5.69	0.22	6.59	16.3	110	1	27	0.21	0.72	13	50	50														
SW5-08	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-08 is upstream. Water level low.	17/07/2017		3.35	12.90	7.60	16.3	11																					
SW5-07	Upstream and downstream sites connected. Outgoing tide, steady flow. high water level. Overcast.	7/10/2017		4.15	42.10	7.58	23.6	20	1	20	0.02	0.38	13	50	50														

SW5-08 - Serpentine Channel

Wet Event Monitoring

[illegible]

SW5-08 - Serpentine Channel

Wet Event Monitoring

[illegible]

SW5-10 - North Arm (Clarence River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW5-10	Photos taken, accurate turbidity reading could not be obtained	3/08/2016		7.33	34.00	8.50	18.0																						
SW5-10		5/09/2016		7.91	12.20	7.51	19.6	14	2	11	0.04	0.39	25	50	50														
SW5-10		10/10/2016		7.22	23.10	7.69	21.8	4																					
SW5-10		1/11/2016		6.33	32.80	7.66	24.2	2	3	5	0.01	0.44	25	50	50														
SW5-10		13/12/2016		9.00	34.40	7.65	25.1	4																					
SW5-10	Tidal	18/01/2017		6.14	31.80	7.26	28.4	9	1	7	0.02	0.40	13	50	50														
SW5-09	Tidal - incoming therefore SW5-09 is downstream.	1/02/2017		4.60	36.30	8.11	27.9	3																					
SW5-10	Very high tide	10/03/2017		6.73	41.70	8.02	24.6	6	1	22	0.08	0.25	50	50	50														
SW5-10	High tide	12/04/2017		4.60	3.16	7.03	23.0	7																					
SW5-10	Tidal. Low flow. Outgoing tide. U/s and d/s sites connected.	3/05/2017		9.41	19.10	7.56	21.2	2	1	18	0.02	0.71	50	50	50														
SW5-10	Weather fine. Connected. Mid water level, outgoing tide.	7/06/2017		8.05	25.50	8.08		3																					
SW5-09	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-09 is downstream. Water level moderate.	14/07/2017		5.95	16.70	7.52	15.8	4	1	8	0.06	0.48	13	50	50														
SW5-10	Upstream and downstream sites connected. Outgoing tide, low flow. Moderate water level. Weather fine.	7/08/2017		8.68	28.10	8.23	17.6	5																					
SW5-10	Weather fine. U/S and D/S connected. No observed flow, high tide.	6/09/2017		7.23	36.30	7.89	18.8	3	1	8	0.02	0.18	13	50	50														
SW5-10	Upstream and downstream connected. Outgoing tide, low water level. Showers.	3/10/2017		5.82	40.60	7.73	21.7	5																					
SW5-09	Upstream and downstream connected. Incoming tide, therefore SW5-09 is downstream. High water level, slight flow.	3/11/2017		4.76	24.80	7.58	23.5	14	1	4	0.02	0.44	13	50	50														
SW5-09	Upstream and downstream connected. Moderate flow, moderate water level. Incoming tide, therefore SW5-09 is downstream. Weather fine.	7/12/2017		5.93	21.20	7.45	25.9	26																					
SW5-09	Upstream and downstream connected. Moderate flow, medium water level. Weather fine. Incoming tide.	17/01/2018		5.32	26.30	7.09	24.6	4	1	14	0.02	0.51	13	50	50														
SW5-10	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	19/02/2018		6.19	33.00	7.88	28.9	10																					
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	21/03/2018		5.75	12.30	7.59	27.2	27	1	25	0.04	0.32	25	50	50														
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	4/04/2018		5.57	17.30	7.70	25.9	32																					

SW5-10 - North Arm (Clarence River)

Dry Event Monitoring

[illegible]

Dry Event Monitoring

P80 & P20 Values (calculated from baseline and upstream data below)

Baseline (pre-construction) Monitoring (identifier from pre-construction)

[illegible]

SW5-10 - North Arm (Clarence River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Section3 SW18		19/03/2013		7.83	0.29	7.04	24.8	18	3	11	0.01	0.80																
Section3 SW18		16/04/2013		8.81	0.59	6.93	25.8	12	3	3	0.07	0.80																
Section3 SW18		21/05/2013		8.39	18.81	6.69	19.1	3	3	14	0.03	0.40																
Section3 SW18		25/06/2013		9.42	12.05	7.27	16.0	5	3	5	0.02	0.43																
Section3 SW18		22/07/2013		9.03	11.50	7.33	17.5	9	3	8	0.03	0.75																
Section3 SW18		19/08/2013		8.76	19.11	7.54	20.0	4	3	14	0.02	0.26																
Section3 SW18		23/09/2013		26.30	8.76	7.26	22.7	4	3	11	0.02	0.40																
Section3 SW18		21/10/2013		8.57	32.10	7.35	25.0	11	3	29	0.02	0.42																
Section3 SW18		25/11/2013		7.99	17.40	6.98	26.8	6	3	190	0.01	0.35																
Section3 SW18		16/12/2013		7.76	22.30	7.24	28.6	12	11	7	1.25	0.10																
Upstream Monitoring																												
SW5-09	Photos taken	3/08/2016		7.40	33.80	8.43	17.9	0																				
SW5-09		5/09/2016		8.26	12.10	7.43	19.0	20	2	29	0.04	0.40	25	50	50													
SW5-09		10/10/2016		7.52	23.20	7.69	22.3	10																				
SW5-09		1/11/2016		6.46	32.50	7.64	24.1	2	8	4	0.02	0.26	25	50	50													
SW5-09		13/12/2016		6.05	34.50	7.56	24.8	6																				
SW5-09	Tidal	18/01/2017		6.17	32.10	7.25	28.2	9	1	4	0.02	0.35	13	50	50													
SW5-10	Tidal - incoming therefore SW5-10 is upstream.	1/02/2017		5.11	36.00	8.19	28.7	0																				
SW5-09	Very high tide	10/03/2017		6.64	41.10	7.94	24.5	9	1	207	0.18	0.25	50	50	50													
SW5-09	High tide	12/04/2017		5.86	2.71	7.04	21.8	48																				
SW5-09	Tidal. Low flow. Outgoing tide. U/s and d/s sites connected.	3/05/2017		9.25	19.70	7.64	20.8	15	1	26	0.02	0.73	50	50	50													
SW5-09	Weather fine. Connected. Mid water level, outgoing tide.	7/06/2017		8.46	25.60	8.02	17.0	29																				
SW5-10	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-10 is upstream. Water level moderate.	14/07/2017		5.51	17.70	7.71	16.1	4	1	41	0.10	0.73	13	50	50													
SW5-09	Upstream and downstream sites connected. Outgoing tide, low flow. Moderate water level. Weather fine.	7/08/2017		8.67	27.90	8.16	17.4	5																				
SW5-09	Weather fine. U/S and D/S connected. No observed flow, high tide.	6/09/2017		7.51	36.40	7.80	18.5	3	1	29	0.02	0.33	13	50	50													
SW5-09	Upstream and downstream connected. Outgoing tide, low water level. Overcast.	3/10/2017		7.00	32.20	7.66	21.1	4																				
SW5-10	Upstream and downstream connected. Incoming tide, high water level. slight flow.	3/11/2017		4.72	25.50	7.75	24.1	4	1	4	0.02	0.31	13	50	50													

SW5-10 - North Arm (Clarence River)

Dry Event Monitoring

[illegible]

SW5-10 - North Arm (Clarence River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	6/05/2019	11:24	6.61	40.80	7.93	21.6	34	1	3	0.01	0.16	30	100	50													
SW5-09	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Weather fine.	4/06/2019	12:10	6.43	46.20	8.11	16.8	47																				
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	4/07/2019	11:11	7.29	41.90	7.87	17.6	7	1	15	0.01	0.22	30	100	50													
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	13/08/2019	10:41	6.56	40.50	7.95	15.8	1																				
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	5/09/2019	13:06	7.25	42.30	7.93	20.1	1	1	6	0.01	0.15	30	100	50													
SW5-10	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Drizzle.	1/10/2019	11:02	6.04	43.10	7.85	21.3	5																				
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	6/11/2019	13:12	5.06	45.40	8.07	24.0	9	1	23	0.02	0.50	13	50	50													
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	6/12/2019	10:38	6.40	47.50	7.90	26.3	3																				
SW5-10	Upstream and downstream sites connected. High flow, medium water level. Incoming tide. Overcast.	15/01/2020	10:59	5.53	47.00	6.50	25.5	4	5	9	0.04	0.22	30	100	50													
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	5/02/2020	12:50	4.67	21.30	7.59	26.9	16																				
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	4/03/2020	11:06	4.66	0.61	6.97	27.3	52	2	19	0.11	1.08	30	100	50													
SW5-09	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	2/04/2020	11:02	5.46	3.44	7.12	24.9	43																				
SW5-09	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	5/05/2020	11:30	6.44	29.30	7.89	20.0	17	2	13	0.04	0.42	30	100	50													
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	4/06/2020	10:24	7.10	33.10	7.83	17.7	11																				
SW5-09	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Drizzle.	13/11/2020	11:48	6.30	39.50	7.69	24.1	19	1	14	0.01	0.28	30	100	50	0.118	0.002	0.0005	0.001	0.001	0.239	0.001	0.039	0.0003	0.000	0.001	0.0050	0.003
SW5-09	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/05/2021	12:05	5.51	5.29	6.56	21.1	33	1	15	0.03	0.88	13	50	50	1.620	0.001	0.0010	0.002	0.002	1.620	0.005	0.200	0.0001	0.003	0.001	0.0005	0.560
SW5-10	Upstream and downstream connected. Low flow. Medium water level. Incoming tide. Overcast.	18/11/2021	12:44	7.16	10.90	8.64	24.4	30	1	47	0.02	0.40	13	50	50	1.710	0.002	0.0010	0.001	0.002	1.440	0.005	0.044	0.0010	0.005	0.002	0.0020	0.008

SW5-10 - North Arm (Clarence River)

Dry Event Monitoring

[illegible]

SW5-10 - North Arm (Clarence River)

Wet Event Monitoring

[illegible]

SW5-10 - North Arm (Clarence River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	5/09/2018	14:58	5.34	71.10	6.77	17.6	9																				
SW5-10	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Overcast.	11/10/2018	12:10	5.09	40.80	7.82	21.6	17	1	20	0.30	1.09	13	50	50													
SW5-10	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.	19/11/2018	11:45	6.41	25.90	7.74	24.5	22																				
SW5-10	Upstream and downstream sites connected. High flow, medium water level. Outgoing tide. Weather fine.	18/12/2018	11:04	6.35	2.30	7.56	26.6	40	2	13	0.06	0.33	30	250	250													
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	11/02/2019	12:38	5.39	40.30	7.87	27.8	10																				
SW5-09	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Weather fine.	9/03/2019	12:01	7.34	41.20	8.29	26.3	8	1	9	0.03	1.00	13	50	50													
SW5-10	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	4/04/2019	12:00	5.76	39.60	8.44	23.4	8																				
SW5-10	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Rain.	24/06/2019	14:57	8.59	43.90	7.80	15.6	10	1	7	0.01	0.19	30	100	50													
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	1/08/2019	11:46	6.07	38.80	7.87	17.3	1																				
SW5-10	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	24/12/2019	11:45	4.75	42.10	7.77	26.7	7																				
SW5-09	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	17/01/2020	13:17	5.62	45.90	7.78	26.4	10	3	14	0.04	0.27	50	100	50													
SW5-10	Upstream and downstream sites connected. High flow, high water level. Outgoing tide. Overcast.	7/02/2020	13:04	4.14	17.20	6.98	25.1	96	3	36	0.09	1.21	30	100	50													
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Drizzle.	7/03/2020	13:19	4.57	4.91	8.49	26.4	57																				
SW5-09	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	11/04/2020	9:48	5.99	13.10	7.25	23.3	27	4	24	0.03	0.62	30	100	50													
SW5-09	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Rain.	10/06/2020	13:16	7.19	19.50	7.71	18.1	10																				
SW5-09	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	8/08/2020	10:39	7.32	23.90	7.60	17.3	11																				
SW5-10	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Drizzle.	16/12/2020	11:31	6.70	5.95	7.15	25.6	41	1	22	0.07	0.38	30	100	50	0.158	0.001	0.0005	0.001	0.001	0.122	0.001	0.068	0.0003	0.001	0.001	0.0050	0.000
SW5-09	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Weather fine.	3/02/2021	11:05	6.20	12.40	7.68	27.7	12																				
SW5-10	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Rain.	6/05/2021	10:37	5.67	7.79	6.76	18.5	65	1	34	0.05	0.68	15	50	50	2.880	0.001	0.0010	0.003	0.002	2.030	0.005	0.170	0.0001	0.003	0.001	0.0005	0.660

SW5-10 - North Arm (Clarence River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW5-09	Upstream and downstream connected. Medium flow. Medium water level. Incoming tide. Rain.	11/11/2021	12:55	6.53	23.30	8.15	25.4	3	1	9	0.02	0.28	13	50	50	0.280	0.001	0.0010	0.001	0.002	0.260	0.005	0.037	0.0001	0.007	0.002	0.0015	0.002	
SW5-10	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Drizzle.	23/05/2022	9:55	6.22	0.14	6.37	17.4	33	2	21	0.07	0.62	30	100	50	0.701	0.001	0.0005	0.001	0.001	0.957	0.001	0.036	0.0003	0.001	0.001	0.0005	0.005	
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					39.40	7.89		38	3	25	0.07	0.62	30	100	50	1.528	0.001	0.0010	0.002	0.002	1.369	0.005	0.106	0.0003	0.004	0.001	0.0029	0.031	
P20				5.35	10.62	7.14																							
St Dev					15.96	0.49																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
Section3 SW18		5/02/2013		3.73	0.46	6.60	26.0	110	3	48	0.10	0.50																	
Section3 SW18		27/05/2013		9.63	15.67	7.29	20.1	3	3	9	0.04	0.40																	
Section3 SW18		2/07/2013		8.86	3.84	7.10	17.2	33	3	13	0.07	0.60																	
Section3 SW18		12/11/2013		8.03	31.00	7.15	26.3	7	3	23	0.02	0.32																	
Upstream Monitoring																													
SW5-09	Technical issues - data not downloaded	5/08/2016																											
SW5-09	Turbidity reading deemed un-reliable	11/11/2016		5.92	33.50	7.99	25.3		1	10	0.02	0.28	50	50	50														
SW5-09		6/01/2017		5.57	33.20	7.55	26.5	46																					
SW5-09		1/03/2017		5.00	41.20	7.81	24.1	7	1	11	21.50	0.25	13	50	50														
SW5-09	Low tide, outflowing. Upstream and downstream connected	6/03/2017		6.22	36.20	7.71	27.6	10																					
SW5-09	Moderate flow. Outgoing tide.	6/04/2017		5.28	0.40	6.76	21.0	19	1	208	0.21	1.55	50	50	50														
SW5-10	Low water level, low flow. Incoming tide therefore SW5-10 is upstream. U/s and d/s sites connected. Drizzle.	4/05/2017		5.44	19.10	7.51	20.6	2																					
SW5-09	Weather showers. Upstream and downstream sites connected. High water level, outgoing tide.	13/06/2017		7.67	2.14	6.49	16.1	95	1	46	0.05	0.90	13	50	50														
SW5-10	Weather fine. Upstream and downstream connected. Low flow, incoming tide therefore SW5-10 is upstream. Water level low.	17/07/2017		6.16	17.30	7.61	16.8	3																					
SW5-09	Upstream and downstream sites connected. Outgoing tide, high water level. Overcast.	7/10/2017		7.59	44.40	8.12	22.6	6	1	5	0.02	0.21	13	50	50														
SW5-10	Connected. Incoming tide. Moderate water level, low flow.	7/11/2017		5.92	23.90	7.89	24.6	14																					

SW5-10 - North Arm (Clarence River)

Wet Event Monitoring

[illegible]

SW5-10 - North Arm (Clarence River)

Wet Event Monitoring

[illegible]

SW5-11 - Mororo Creek (South)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW5-11	Stagnant water. Photo taken. Accurate turbidity reading could not be obtained.	3/08/2016		3.61	20.90	7.79	16.2																						
SW5-11		5/09/2016		3.37	0.61	6.68	15.1	4	5	4	0.05	0.63	25	50	50														
SW5-11		10/10/2016		0.80	17.20	6.75	18.9	13																					
SW5-11		1/11/2016		1.39	25.80	6.84	22.5	8	5	5	0.03	0.45	25	50	50														
SW5-11		13/12/2016		2.27	28.10	6.58	22.2	3																					
SW5-11	Tidal - very low water level with no flow	18/01/2017		8.66	0.07	6.59	26.8	127	1	31	0.24	1.98	13	50	50														
SW5-11	Tidal - very low water level with no flow	1/02/2017		1.09	27.80	6.99	25.0	5																					
SW5-11	Very high tide	10/03/2017		2.78	23.00	6.59	23.0	8	1	14	0.10	0.40	50	50	50														
SW5-11	Stagnant - no visible flow.	12/04/2017		2.48	0.30	6.32	19.9	1																					
SW5-11	Tidal. Low flow. Outgoing tide.	3/05/2017		8.56	4.85	6.46	19.0	5	1	8	0.06	1.00	50	50	50														
SW5-11	Weather fine. Low water level. Stagnant.	7/06/2017		0.67	12.80	6.49		8																					
SW5-11	Weather fine. Low water level. No flow, stagnant.	14/07/2017		1.96	0.97	6.58	13.1	5	1	13	0.06	1.30	13	50	50														
SW5-11	Very low flow. Low water level. Weather fine.	7/08/2017		1.00	6.79	6.32	14.3	21																					
SW5-11	Weather fine. No U/S site. Water level low. No observed flow.	6/09/2017		1.20	27.90	6.39	15.7	0	1	6	0.02	0.40	13	50	50														
SW5-11	Outgoing tide, low water level. Overcast.	3/10/2017		1.15	34.80	6.84	19.3	4																					
SW5-11	Little to no flow, water level low.	3/11/2017		1.24	8.12	6.39	20.6	46	1	9	0.07	1.25	13	50	50														
SW5-11	No visible flow, low water level. Weather fine.	7/12/2017		3.12	0.41	6.39	21.8	28																					
SW5-11	No visible flow, low water level. Weather fine.	17/01/2018		1.04	6.77	6.09	22.6	26	1	14	0.06	1.10	13	50	50														
SW5-11	No visible flow, very low water level. Slight sulphur smell. Weather fine.	19/02/2018		2.26	22.10	6.94	27.8	25																					
SW5-11	No visible flow, medium water level. Light surface scum layer in areas. Weather fine.	21/03/2018		0.94	0.53	6.88	23.6	11	1	13	0.08	0.70	25	50	50														
SW5-11	No visible flow, low water level. Weather fine.	4/04/2018		1.23	0.99	6.97	21.6	12																					
SW5-11	No visible flow, low water level. Weather fine.	18/05/2018		2.04	14.90	7.03	16.0	18	2	9	0.03	0.47	25	50	25														
SW5-11	No visible flow, low water level. Weather fine.	14/06/2018	11:57	4.31	0.78	7.04	15.2	5																					
SW5-11	No visible flow, low water level. Weather fine.	19/07/2018	11:47	1.96	16.60	7.19	13.1	8	1	16	0.04	0.39	30	250	250														
SW5-11	No visible flow, very low water level. Weather fine.	8/08/2018	11:38	0.00	28.70	6.96	15.4	13																					
SW5-11	No visible flow, low water level. Bacteria/scum layer present. Weather fine.	20/09/2018	12:46	6.13	3.08	7.07	19.9	28	2	9	0.06	0.60	30	250	250														
SW5-11	No visible flow, low water level. Slight bacteria layer. Weather fine.	2/10/2018	12:01	1.79	15.70	7.01	18.0	16																					
SW5-11	Very low flow, low water level. Weather fine.	6/11/2018	13:05	0.67	2.14	6.73	24.8	26	5	16	0.09	0.85	30	100	50														
SW5-11	No visible flow, medium water level. Very light scum layer on surface. Weather fine.	6/12/2018	12:15	0.72	28.10	6.95	23.6	26																					

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW5-11	No visible flow, medium water level. Light scum layer. Weather fine.	10/01/2019	13:13	2.09	18.90	7.07	26.6	21	1	5	0.06	0.43	30	250	250													
SW5-11	Upstream and downstream sites not connected. No visible flow, low water level. Slight scum layer and odour. Weather fine.	12/02/2019	11:25	2.15	34.50	7.28	26.1	7																				
SW5-11	No visible flow, low water level. Incoming tide. Weather fine.	13/03/2019	12:32	2.23	37.60	7.22	25.8	3	4	5	0.04	0.53	30	100	50													
SW5-11	No visible flow, low water level. Outgoing tide. Overcast.	10/04/2019	10:47	1.74	35.30	7.13	22.5	7																				
SW5-11	No visible flow, low water level. Incoming tide. Overcast.	6/05/2019	11:34	1.12	34.20	7.11	18.5	9	1	4	0.01	0.36	30	100	50													
SW5-11	No visible flow, medium water level. Weather fine.	4/06/2019	12:03	2.82	40.00	7.10	13.8	5																				
SW5-11	No visible flow, medium water level. Water slightly milky. Overcast.	4/07/2019	11:20	4.75	19.70	6.83	16.6	22	1	8	0.01	1.13	30	100	50													
SW5-11	No visible flow, medium water level. Slight surface bacteria layer, odour. Weather fine.	13/08/2019	10:31	0.00	36.00	6.71	15.3	1																				
SW5-11	No visible flow, low water level. Incoming tide. Weather fine.	5/09/2019	12:35	0.29	36.70	6.71	17.7	1	2	1	0.01	0.28	30	100	50													
SW5-11	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	1/10/2019	10:45	0.58	38.00	6.70	19.5	7																				
SW5-11	No visible flow, very low water level. Weather fine.	6/11/2019	12:57	1.63	41.20	7.19	22.1	3	1	4	0.02	0.91	13	50	50													
SW5-11	No visible flow, very low water level. Weather fine.	6/12/2019	10:45	3.29	44.50	7.13	23.4	11																				
SW5-11	No visible flow, very low water level. Overcast.	15/01/2020	10:34	0.28	44.00	5.45	24.2	10	5	5	0.06	0.69	30	100	50													
SW5-11	No visible flow, low water level. Overcast.	5/02/2020	12:44	0.00	12.10	6.52	25.1	29																				
SW5-11	No visible flow, low water level. Overcast.	4/03/2020	10:52	0.92	0.45	6.40	24.6	9	2	20	0.14	1.29	30	100	50													
SW5-11	No visible flow, low water level. Outgoing tide. Weather fine.	2/04/2020	10:52	2.27	0.49	6.35	21.6	22																				
SW5-11	No visible flow, low water level. Outgoing tide. Weather fine.	5/05/2020	11:15	2.10	12.20	6.73	18.0	35	1	6	0.06	0.70	30	100	50													
SW5-11	No visible flow, medium water level. Weather fine.	4/06/2020	10:34	1.69	25.60	6.70	16.4	20																				
SW5-11	No visible flow, medium water level. Outgoing tide. Drizzle.	13/11/2020	11:54	1.41	29.90	6.80	22.6	18	1	3	0.01	0.50	30	100	50	0.031	0.001	0.0005	0.001	0.001	0.732	0.001	0.201	0.0003	0.000	0.001	0.0050	0.002
SW5-11	No visible flow, low water level. Overcast.	4/05/2021	11:56	3.96	0.32	7.05	18.3	19	1	10	0.03	0.80	13	50	50	3.050	0.001	0.0010	0.002	0.002	2.620	0.005	0.063	0.0001	0.003	0.001	0.0005	0.077
SW5-11	Unable to determine if connected. Very low flow. Low water level. Overcast. Water stagnant.	18/11/2021	12:21	3.36	7.02	8.26	22.1	12	1	5	0.03	0.70	13	50	50	0.280	0.002	0.0010	0.001	0.002	3.430	0.005	0.280	0.0001	0.003	0.002	0.0015	0.004
SW5-11	No downstream site. No visible flow, low water level. Weather fine.	4/05/2022	13:07	2.80	0.27	7.47	19.7	32	1	8	0.06	0.78	13	50	50	1.110	0.001	0.0010	0.001	0.002	3.030	0.005	0.270	0.0001	0.003	0.001	0.0005	0.007
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					4.86	6.66		27	3	19	0.07	1.00	#NUM!	#NUM!	#NUM!	0.090	0.001	0.0001	0.001	0.001	0.290	0.001	0.120	0.0001	0.001	0.003	0.0001	0.007
P20				4.75	0.36	6.24																						
St Dev					8.52	0.39																						
Threshold				0.50				10	2	10	0.02	0.20																

SW5-11 - Mororo Creek (South)

Dry Event Monitoring

[illegible]

SW5-11 - Mororo Creek (South)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Downstream Monitoring																												
SW5-11	Technical issues - data not downloaded	5/08/2016																										
SW5-11	Accurate turbidity reading could not be obtained	11/11/2016		2.75	28.10	6.86	23.1		1	4	0.02	0.45	50	50	50													
SW5-11		6/01/2017		2.45	28.50	6.71	24.2	12																				
SW5-11	Slightly turbid waters	1/03/2017		4.42	0.80	5.61	19.8	45	1	9	0.06	4.10	13	50	50													
SW5-11	Low water level. No flow.	6/03/2017		2.96	1.30	6.69	24.7	6																				
SW5-11	Low flow. Tannin stained water.	6/04/2017		2.53	0.32	6.00	19.2	2	1	10	0.05	1.14	50	50	50													
SW5-11	Low water level, low flow. Incoming tide. Drizzle.	4/05/2017		3.08	1.46	6.13	17.9	6																				
SW5-11	Weather showers. Water level high, moderate flow	13/06/2017		6.84	0.07	6.37	16.1	146	1	37	0.07	1.20	13	50	50													
SW5-11	Weather fine. No flow, water level low. Stagnant.	17/07/2017		1.68	0.56	6.23	13.8	3																				
SW5-11	No observed flow, high water level. Overcast.	7/10/2017		1.69	35.60	6.99	21.4	2	1	5	0.02	0.40	13	50	50													
SW5-11	Water level low, stagnant. No flow.	7/11/2017		4.02	3.31	6.71	20.9	2																				
SW5-11	Water level low, stagnant. Overcast.	1/12/2017		3.14	3.67	5.77	23.9	9	1	9	0.03	1.56	13	50	50													
SW5-11	High water level, weather fine.	3/01/2018		2.37	0.37	6.25	23.0	30																				
SW5-11	No visible flow, very high water level. Overcast.	1/02/2018		0.00	19.20	6.36	25.0	45	2	19	0.06	0.38	25	50	50													
SW5-11	Very low flow, low water level. Overcast.	7/03/2018		1.40	0.52	6.58	22.0	15																				
SW5-11	No visible flow, low water level. Incoming tide. Weather fine.	19/04/2018		0.61	12.80	6.99	22.0	12	3	8	0.05	0.48	30	250	250													
SW5-11	No visible flow, low water level. Weather fine.	10/05/2018		3.06	1.43	7.17	18.7	8																				
SW5-11	No visible flow, medium water level. Drizzle.	6/06/2018	11:39	5.12	13.10	6.82	15.6	23	4	11	0.03	0.29	30	250	250													
SW5-11	No visible flow, low water level. Rain.	5/07/2018	11:40	2.70	5.39	6.99	16.4	18																				
SW5-11	No visible flow, low water level. Slight oily residue and odour. Light dust layer on surface. Drizzle.	25/08/2018	10:13	3.69	21.20	7.29	14.5	31	2	16	0.04	1.18	30	250	250													
SW5-11	No visible flow, low water level. Overcast.	5/09/2018	14:48	6.11	5.00	5.90	16.6	117																				
SW5-11	No visible flow, medium water level. Overcast.	11/10/2018	11:45	3.19	28.10	6.67	20.2	9	1	8	0.04	0.58	13	50	50													
SW5-11	No visible flow, very low water level. Overcast.	19/11/2018	11:28	3.68	5.76	6.07	21.2	21																				
SW5-11	No visible flow, low water level. Weather fine.	18/12/2018	11:21	1.60	17.20	6.70	24.5	14	3	6	0.04	0.44	30	250	250													
SW5-11	No visible flow, low water level. Weather fine.	11/02/2019	12:46	1.51	34.70	7.12	26.1	14																				
SW5-11	No visible flow, low water level. Incoming tide. Weather fine.	9/03/2019	11:48	1.30	31.60	7.20	25.5	21	1	8	0.03	1.18	13	50	50													
SW5-11	No visible flow, very low water level. Weather fine.	4/04/2019	11:36	3.38	27.80	7.37	22.5	14																				
SW5-11	No visible flow, medium water level. Drizzle.	24/06/2019	14:41	4.32	40.00	6.93	13.7	0	3	4	0.05	0.25	30	100	50													
SW5-11	No visible flow, medium water level. Water slightly milky. Overcast.	1/08/2019	11:20	0.52	21.20	6.51	15.5	5																				
SW5-11	No visible flow, low water level. Outgoing tide. Overcast.	24/12/2019	11:33	3.51	23.70	7.03	24.4	15																				

Wet Event Monitoring

P80 & P20 Values (calculated from baseline and upstream data below)

SW5-11 - Mororo Creek (South)

Wet Event Monitoring

[illegible]

SW6-02 - Unnamed tributary of Mororo Creek (north)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW6-02	Dry. Photo taken.	3/08/2016																											
SW6-02	Dry	5/09/2016																											
SW6-02	Dry	10/10/2016																											
SW6-02	Dry	1/11/2016																											
SW6-02	Dry	14/12/2016																											
SW6-02	Dry	17/01/2017																											
SW6-02	Dry	1/02/2017																											
SW6-02	Dry	3/03/2017																											
SW6-02	Dry	21/04/2017																											
SW6-02	Dry	10/05/2017																											
SW6-02	Dry	9/06/2017																											
SW6-02	Dry	12/07/2017																											
SW6-02	Dry	3/08/2017																											
SW6-02	Weather fine. U/S and D/S not connected. Waterway dry.	8/09/2017																											
SW6-02	Dry	25/10/2017																											
SW6-02	Dry	1/11/2017																											
SW6-02	Dry	14/12/2017																											
SW6-02	Dry	16/01/2018																											
SW6-02	Dry - not sampled. Weather fine.	20/02/2018																											
SW6-02	Dry - not sampled. Overcast.	21/03/2018																											
SW6-02	Dry - not sampled. Overcast.	4/04/2018																											
SW6-02	Dry	18/05/2018																											
SW6-02	Waterway dry except for two very small pools which had insufficient water to sample.	14/06/2018	12:45																										
SW6-02	Dry, not sampled.	19/07/2018	12:41																										
SW6-02	Waterway dry, not sampled.	8/08/2018	11:50																										
SW6-02	Waterway dry, not sampled.	20/09/2018	14:36																										
SW6-02	Dry, not sampled.	2/10/2018	12:30																										
SW6-02	Dry, not sampled.	6/11/2018	13:50																										
SW6-02	Dry, not sampled.	6/12/2018	12:48																										
SW6-02	Dry, not sampled.	10/01/2019	13:31																										

SW6-02 - Unnamed tributary of Mororo Creek (north)

Dry Event Monitoring

[illegible]

SW6-02 - Unnamed tributary of Mororo Creek (north)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW20		28/02/2013		4.36	0.29	6.31	25.1	29	3	8	0.05	0.80																
Section3 SW20		19/03/2013		4.81	0.70	6.69	21.0	7	3	3	0.05	0.70																
Section3 SW20		16/04/2013		5.06	0.27	6.30	21.7	32	3	9	0.04	0.80																
Section3 SW20		20/05/2013		6.43	1.21	6.75	15.1	15	3	7	0.03	0.50				0.005	0.001	0.0001	0.001	0.001	0.025	0.001	0.270	0.0001	0.001	0.003	0.0001	0.003
Section3 SW20		25/06/2013		5.74	1.30	6.25	13.7	13	3	3	0.02	0.40																
Section3 SW20		22/07/2013		7.62	0.87	6.26	14.5	25	3	13	0.02	0.44																
Section3 SW20		19/08/2013		4.75	1.56	6.77	15.6	6	3	3	0.02	0.42																
Section3 SW20		23/09/2013		3.18	1.15	6.70	19.8	9	3	13	0.06	0.85																
Section3 SW20		21/10/2013		4.92	1.62	7.02	23.2	34	3	43	0.08	2.40																
Section3 SW20		25/11/2013		7.80	0.74	6.55	24.8	21	3	6	0.01	0.54																
Section3 SW20		16/12/2013		4.84	1.41	6.75	24.5	14	7	6	0.25	1.00																
Upstream Monitoring																												
SW6-01	Dry. Photo taken.	3/08/2016																										
SW6-01	Dry	5/09/2016																										
SW6-01	Dry	10/10/2016																										
SW6-01	Dry	1/11/2016																										
SW6-01	Dry	14/12/2016																										
SW6-01	Dry	17/01/2017																										
SW6-01	Dry	1/02/2017																										
SW6-01	No flow/ stagnant pool. Upstream and downstream sites not connected.	3/03/2017		2.02	0.19	6.46	22.4	15	2	3	0.08	1.15	25	50	50													
SW6-01	Stagnant pool, u/s and d/s sites not connected. Overcast.	21/04/2017		5.57	0.33	6.69	18.8	18																				
SW6-01	Insufficient water for sample	10/05/2017																										
SW6-01	Insufficient water for sample	9/06/2017																										
SW6-01	Dry	12/07/2017																										
SW6-01	Insufficient water to sample	3/08/2017																										
SW6-01	Weather fine. U/S and D/S not connected. Waterway dry.	8/09/2017																										
SW6-01	Insufficient water to sample, stream path blocked by temporary crossing.	25/10/2017																										
SW6-01	Insufficient water to sample. Gravel access track layer down over stream path but dry in this area at time of monitoring.	1/11/2017																										

SW6-02 - Unnamed tributary of Mororo Creek (north)

Dry Event Monitoring

[illegible]

SW6-02 - Unnamed tributary of Mororo Creek (north)

Wet Event Monitoring

[illegible]

SW6-02 - Unnamed tributary of Mororo Creek (north)

Wet Event Monitoring

[illegible]

SW6-02 - Unnamed tributary of Mororo Creek (north)

Wet Event Monitoring

[illegible]

SW6-02 - Unnamed tributary of Mororo Creek (north)

Wet Event Monitoring

[illegible]

SW6-04 - Tabbimoble Creek

Dry Event Monitoring

[illegible]

SW6-04 - Tabbimoble Creek

Dry Event Monitoring

[illegible]

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/06/2019	14:37	0.25	0.20	7.32	12.3	38																					
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/07/2019	12:50	0.86	0.18	6.90	14.1	17	1	6	0.02	0.59	30	100	50														
SW6-04	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	13/08/2019	11:17	0.91	0.49	7.25	12.6	2																					
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	5/09/2019	14:23	0.00	0.27	6.55	14.0	5	3	3	0.01	0.48	30	100	50														
SW6-04	No visible flow, very low water level. Overcast.	1/10/2019	11:51	2.45	0.26	6.68	17.6	18																					
SW6-04	Not monitored in November 2019 due to risks associated with bushfires.																												
SW6-04	Not monitored in December 2019 due to risks associated with bushfires.																												
SW6-04	Dry, not sampled. Monitored approx. 140 m west due to access issues associated with recent bushfires.	15/01/2020	11:48																										
SW6-04	Upstream and downstream sites connected. Very high flow, high water level. Evidence of recent flooding. Overcast.	17/02/2020	9:20	7.07	0.16	6.15	25.3	9																					
SW6-04	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	4/03/2020	12:17	6.99	0.17	6.67	25.3	6	1	8	0.04	0.66	30	100	50														
SW6-04	Upstream and downstream sites connected. Very high flow, medium water level. Weather fine.	2/04/2020	11:33	7.97	0.19	7.23	21.9	11																					
SW6-04	Medium flow, medium water level. Weather fine.	5/05/2020	12:28	9.35	0.19	7.57	16.3	13	1	4	0.02	0.42	30	100	50														
SW6-04	High flow, low water level. Weather fine.	4/06/2020	11:07	9.98	0.21	7.47	13.8	9																					
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	13/11/2020	13:12	1.11	0.34	6.67	19.1	15	1	4	0.03	0.45	30	100	50	0.050	0.001	0.0005	0.001	0.001	2.706	0.001	0.409	0.0003	0.000	0.001	0.0050	0.011	
SW6-04	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	4/05/2021	12:37	8.02	0.12	7.11	18.5	58	1	24	0.02	0.53	13	50	50	5.240	0.001	0.0010	0.004	0.002	2.420	0.005	0.039	0.0001	0.003	0.001	0.0005	0.006	
SW6-04	Upstream and downstream connected. Medium flow. Medium water level. Overcast.	23/11/2021	11:54	8.89	0.17	6.90	21.7	10	1	4	0.04	0.38	30	100	50	0.130	0.002	0.0015	0.002	0.002	3.514	0.002	0.067	0.0003	0.001	0.001	0.0015	0.002	
SW6-04	Upstream and downstream sites connected. High flow, high water level. Weather fine.	16/05/2022	11:51	7.55	0.09	5.36	20.8	12	2	12	0.03	0.42	30	100	50	0.716	0.001	0.0005	0.001	0.001	1.007	0.001	0.018	0.0003	0.001	0.001	0.0005	0.005	
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.27	7.04		28	3	26	0.04	0.54	30	100	50	1.654	0.001	0.0011	0.001	0.001	4.660	0.002	0.333	0.0003	0.001	0.002	0.0022	0.014	
P20				1.99	0.14	6.35																							
St Dev					0.12	0.40																							
Threshold				0.50				10	2	10	0.02	0.20																	

SW6-04 - Tabbimoble Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW21		28/02/2013		7.54	0.09	6.22	25.6	12	3	7	0.03	0.60																
Section3 SW21		19/03/2013		7.97	0.13	7.03	20.3	14	3	24	0.01	0.60																
Section3 SW21		16/04/2013		7.71	0.20	6.38	20.4	21	3	13	0.02	0.60																
Section3 SW21		20/05/2013		9.57	0.14	7.33	14.5	13	3	6	0.02	0.40				0.040	0.001	0.0001	0.001	0.001	0.270	0.001	0.017	0.0005	0.001	0.003	0.0001	0.003
Section3 SW21		25/06/2013		10.30	0.23	7.05	12.7	17	3	3	0.03	0.33																
Section3 SW21		22/07/2013		9.56	0.51	6.57	14.5	13	3	9	0.01	0.54																
Section3 SW21		19/08/2013		9.09	0.33	7.32	17.0	13	3	3	0.05	0.13																
Section3 SW21		23/09/2013		7.20	0.28	7.32	19.8	25	3	20	0.01	0.33																
Section3 SW21		21/10/2013		3.41	0.39	6.69	23.3	29	3	29	0.02	0.40																
Section3 SW21		25/11/2013		7.38	0.35	6.02	24.7	13	3	50	0.01	0.54																
Section3 SW21		16/12/2013		6.93	0.18	6.35	22.9	14	5	4	0.25	0.30																
Upstream Monitoring																												
SW6-03	Photo taken	3/08/2016		10.61	0.19	7.65	13.7	0																				
SW6-03		8/09/2016		9.37	0.16	6.46	14.8	8	5	5	0.02	0.31	25	50	50													
SW6-03		10/10/2016		3.96	0.20	6.21	19.4	10																				
SW6-03		1/11/2016		3.15	0.21	6.60	22.2	49	8	31	0.05	0.66	25	50	50													
SW6-03	Low water level, no flow. Upstream and downstream sites are disconnected.	14/12/2016		3.39	0.18	6.34	22.2	15																				
SW6-03	No visible flow. Upstream and downstream sites are disconnected.	17/01/2017		0.40	0.21	6.42	24.0	27	2	26	0.07	0.90	25	50	50													
SW6-03	Very low water level, heavy scum layer, u/s and d/s sites not connected. No visible flow.	1/02/2017		1.02	0.19	6.98	24.3	19																				
SW6-03	Steady flow, multiple inflow points. Upstream and downstream sites connected.	3/03/2017		6.72	0.15	6.29	21.6	12	3	4	0.03	0.58	25	50	50													
SW6-03	Low but steady flow. U/s and d/s sites connected. Overcast.	21/04/2017		7.73	0.11	6.83	18.7	29																				
SW6-03	Overcast weather. u/s and d/s connected. Moderate flow with a low water level. Brown colour	10/05/2017		8.24	0.14	6.69	16.3	15	2	7	0.02	0.21	25	50	50													
SW6-03	Unable to determine if upstream and downstream sites were connected due access issues relating to works occuring between sites. No visible flow. High water level. Weather fine.	9/06/2017		0.00	0.25	6.11	13.0	19																				
SW6-03	Unable to determine if upstream and downstream were connected (no access). Low flow. Low to mid water level. Weather fine.	12/07/2017		10.83	0.13	6.60	12.6	12	2	2	0.02	0.18	25	50	50													

Dry Event Monitoring

[illegible]

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW6-03	Insufficient water to monitor.	11/02/2019	13:33																									
SW6-03	Insufficient water to sample.	13/03/2019	13:23																									
SW6-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	10/04/2019	11:45	5.25	0.18	6.67	21.1	66																				
SW6-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	6/05/2019	13:02	0.99	0.20	6.98	18.2	58	1	21	0.01	0.27	30	100	50													
SW6-03	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/06/2019	14:46	2.19	0.25	6.55	12.7	2																				
SW6-03	Upstream and downstream sites not connected. Sampled in a small pool of water with no visible flow, very low water level. Drizzle.	4/07/2019	12:42	2.18	0.22	6.71	14.8	8	3	2	0.01	0.37	30	100	50													
SW6-03	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	13/08/2019	11:10	0.00	0.44	6.72	12.9	3																				
SW6-03	Insufficient water to monitor.	5/09/2019	14:42																									
SW6-03	Dry, not sampled.	1/10/2019	11:48																									
SW6-03	Not monitored in November 2019 due to risks associated with bushfires.																											
SW6-03	Not monitored in December 2019 due to risks associated with bushfires.																											
SW6-03	No access due to risks associated with recent bushfires.	15/01/2020	11:47																									
SW6-03	No access due to risks associated with recent bushfires.	17/02/2020	9:28																									
SW6-03	No access due to risks associated with recent bushfires.	4/03/2020	12:03																									
SW6-03	No access due to risks associated with recent bushfires.	2/04/2020	11:36																									
SW6-03	No access due to risks associated with recent bushfires.	5/05/2020	12:32																									
SW6-03	No access due to risks associated with recent bushfires.	4/06/2020	11:07																									
SW6-03	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	13/11/2020	13:04	5.14	0.77	6.62	19.5	95	6	27	0.03	0.37	30	100	50	0.049	0.001	0.0005	0.001	0.001	9.364	0.001	1.424	0.0003	0.001	0.001	0.0050	0.003
SW6-03	Upstream and downstream sites connected. High flow, medium water level. Overcast.	4/05/2021	12:32	8.50	0.12	7.32	18.7	69	1	25	0.02	0.52	13	50	50	5.880	0.001	0.0010	0.004	0.002	2.590	0.005	0.042	0.0001	0.003	0.001	0.0005	0.042
SW6-03	Upstream and downstream connected. Medium flow. Medium water level. Overcast.	23/11/2021	11:48	8.05	0.17	7.20	22.1	12	1	5	0.03	0.24	30	100	50	0.125	0.001	0.0015	0.001	0.001	3.484	0.002	0.061	0.0003	0.001	0.002	0.0015	0.007
SW6-03	Upstream and downstream sites connected. High flow, high water level. Weather fine.	16/05/2022	11:45	9.13	0.09	5.63	21.0	13	2	7	0.02	0.34	30	100	50	0.598	0.001	0.0005	0.001	0.001	0.985	0.001	0.017	0.0003	0.001	0.001	0.0005	0.003

SW6-04 - Tabbimoble Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW6-04	Photo taken	5/08/2016		8.39	0.11	6.20	13.3	18																					
SW6-04		10/11/2016		2.25	0.20	7.22	20.9	4	1	7	0.04	0.56	25	50	50														
SW6-04	No visible flow from upstream, but inflow from other directions	6/01/2017		2.88	0.20	6.32	22.9	17																					
SW6-04	Strong flow with multiple inflow points. Consistent rain. U/S and D/S site connected.	28/02/2017		6.56	0.08	5.93	20.5	138	5	59	0.07	0.75	25	50	50														
SW6-04	Gentle flow. Upstream and downstream sites connected.	6/03/2017		4.33	0.15	6.23	22.5	6																					
SW6-04	Strong flow. High water level (at top of bank). U/s and d/s sites connected	6/04/2017		7.31	0.10	6.19	19.2	20	1	3	0.03	0.74	25	50	50														
SW6-04	Slight flow. U/s and d/s sites connected. Weather fine.	4/05/2017		7.91	0.14	6.77	17.7	20																					
SW6-04	Upstream and downstream sites connected. High flow. Very high water level. Sunny.	13/06/2017		9.16	0.05	5.86	16.1	86	1	34	0.06	0.55	25	50	50														
SW6-04	Unable to confirm if upstream and downstream sites were connected. No visible flow. Low water level. Weather fine.	17/07/2017		10.22	0.13	6.61	14.7	12																					
SW6-04	Upstream and downstream sites connected. No visible flow. Low water level. Weather fine.	9/10/2017		1.85	0.15	6.70	19.5	9	2	12	0.06	0.54	25	50	50														
SW6-04	Unable to determine if upstream and downstream sites connected. Medium flow, medium - high water level. Weather fine.	7/11/2017		6.68	0.14	6.31	19.3	10																					
SW6-04	Unable to determine connection. Medium flow, medium to high water level. Rain.	1/12/2017		4.57	0.15	6.25	20.5	12	1	17	0.02	0.56	25	50	50														
SW6-04	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	3/01/2018		6.11	0.14	6.52	22.0	17																					
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Drizzle.	5/02/2018		0.15	0.19	6.62	20.7	13	2	12	0.04	0.40	25	50	50														
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	7/03/2018		2.54	0.15	6.44	22.4	42																					
SW6-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	26/04/2018		1.52	0.17	6.62	18.5	9	2	11	0.04	0.40	30	250	250														
SW6-04	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	10/05/2018		1.14	0.17	7.02	17.2	7																					
SW6-04	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Overcast.	7/06/2018	11:57	6.88	0.11	6.73	15.1	79	5	567	0.15	0.92	30	250	250														
SW6-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Drizzle.	5/07/2018	13:40	2.04	0.12	6.56	14.0	40																					
SW6-04	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	10:24	4.67	0.14	7.12	10.9	18	4	11	0.02	0.34	30	250	250														

Wet Event Monitoring

[illegible]

SW6-04 - Tabbimoble Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.22	6.78		48	3	30	0.05	0.63	30	190	170	1.440	0.001	0.0011	0.002	0.002	1.766	0.002	0.038	0.0012	0.001	0.002	0.0050	0.008
P20				2.99	0.12	6.10																						
St Dev					0.09	0.51																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW21		5/02/2013		7.76	0.19	5.93	24.5	11	3	6	0.02	0.30																
Section3 SW21		27/05/2013		9.26	0.54	7.11	15.8	22	3	10	0.04	0.40				0.050	0.001	0.0001	0.001	0.001	0.290	0.001	0.015	0.0003	0.001	0.003	0.0001	0.006
Section3 SW21		2/07/2013		7.12	0.19	6.20	16.0	16	3	3	0.04	0.90																
Section3 SW21		12/11/2013		7.72	0.19	6.10	22.9	48	3	36	0.02	0.55																
Upstream Monitoring																												
SW6-03	Photo taken	5/08/2016		8.44	0.10	6.20	13.5	17																				
SW6-03		10/11/2016		2.31	0.22	7.61	22.1	36	3	21	0.05	0.79	25	50	50													
SW6-03	No visible flow to downstream	6/01/2017		7.14	0.09	5.95	24.3	827																				
SW6-03	Strong flow with multiple inflow points. Consistent rain. U/S and D/S sites connected.	28/02/2017		7.19	0.06	6.01	20.3	149	6	83	0.07	0.76	25	50	50													
SW6-03	Gentle flow. Upstream and downstream sites connected.	6/03/2017		5.69	0.15	6.51	22.5	5																				
SW6-03	Strong flow. High water level (at top of bank). U/s and d/s sites connected	6/04/2017		7.62	0.09	6.32	19.5	22	1	7	0.03	0.54	25	50	50													
SW6-03	Moderate flow. U/s and d/s sites connected. Weather fine.	4/05/2017		8.05	0.14	6.80	17.8	16																				
SW6-03	Upstream and downstream sites connected. High flow. Very high water level. Sunny.	13/06/2017		8.93	0.06	6.10	16.5	52	1	15	0.07	0.66	25	50	50													
SW6-03	Unable to confirm if upstream and downstream sites were connected. Steady flow. Medium water level. Weather fine.	17/07/2017		10.14	0.13	6.52	13.8	13																				
SW6-03	Upstream and downstream sites connected. No visible flow. Low water level. Weather fine.	9/10/2017		2.26	0.19	6.70	19.7	15	1	16	0.04	0.39	25	50	50													
SW6-03	Unable to determine if upstream and downstream sites connected. Medium flow, medium - high water level. Weather fine.	7/11/2017		7.09	0.14	6.39	19.2	7																				
SW6-03	Unable to determine connection. High flow, medium water level. Drizzle.	1/12/2017		7.32	0.14	6.53	20.4	25	1	16	0.03	0.33	25	50	50													
SW6-03	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	3/01/2018		5.42	0.13	6.13	22.3	14																				

SW6-04 - Tabbimoble Creek

Wet Event Monitoring

[illegible]

SW6-04 - Tabbimoble Creek

Wet Event Monitoring

[illegible]

SW6-06 - Tabbimoble Overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW6-06	Photo taken	3/08/2016		0.00	0.18	6.88	13.7	15																					
SW6-06		8/09/2016		1.58	0.15	6.03	15.0	23	2	21	0.05	1.28	25	50	50														
SW6-06		10/10/2016		0.76	0.17	6.13	16.5	8																					
SW6-06		1/11/2016		0.71	0.18	6.46	20.3	13	5	10	0.06	1.53	25	50	50														
SW6-06	Upstream and downstream points are disconnected.	14/12/2016		0.05	0.19	6.04	21.3	24																					
SW6-06	No visible flow. Upstream and downstream sites are disconnected. Heavy scum layer.	17/01/2017		0.16	0.16	6.29	23.3	43	1	44	0.18	1.56	25	50	50														
SW6-06	Very low water level, heavy scum layer, u/s and d/s sites not connected. No visible flow.	1/02/2017		0.69	0.13	6.46	24.2	12																					
SW6-06	Medium water level. Upstream and downstream sites connected by very gentle flow.	3/03/2017		2.37	0.12	5.61	23.3	26	5	15	0.05	1.40	25	50	50														
SW6-06	No visible flow. U/s and d/s sites not connected. Drizzle	21/04/2017		0.50	0.15	5.92	18.5	33																					
SW6-06	Overcast weather. u/s and d/s not connected. No visible flow. Low water level.	10/05/2017		0.88	0.15	6.20	16.8	21	3	23	0.04	0.89	25	50	50														
SW6-06	Upstream and downstream sites not connected. No visible flow. Water level low to moderate. Weather fine.	9/06/2017		1.36	0.16	6.05	13.5	20																					
SW6-06	Upstream and downstream sites not connected. No visible flow. Mid water level. Dust layer on surface of water. Weather fine.	12/07/2017		2.06	0.12	6.03	12.5	27	2	17	0.06	0.85	25	50	50														
SW6-06	Upstream and downstream sites not connected. No visible flow. Low to mid water level. Dust layer on surface and sand build-up on edge of bank. Weather fine.	9/08/2017		1.81	0.14	6.51	10.8	6																					
SW6-06	U/S and D/S not connected. No observed flow. Low water level.	8/09/2017		2.43	0.16	6.21	12.6	26	1	26	0.05	0.94	25	50	50														
SW6-06	Upstream and downstream sites were not connected. No visible flow, low water level. Brown colour, slight surface scum. Weather fine.	25/10/2017		2.80	0.22	6.59	17.8	26																					
SW6-06	Upstream and downstream sites not connected. Low water level, no visible flow. Overcast.	1/11/2017		1.75	0.22	6.90	19.2	28	5	15	0.07	1.39	25	50	50														
SW6-06	Upstream and downstream sites not connected. Very low flow, medium water level. Surface scum layer. Weather fine.	14/12/2017		3.13	0.19	6.63	22.2	6																					
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	16/01/2018		0.00	0.22	6.68	21.3	12	12	13	0.09	1.34	25	50	50														
SW6-06	No connection between upstream and downstream points. No visible flow, low water level. Tannin stained water. Weather fine.	20/02/2018		1.89	0.25	6.70	24.4	6																					
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	21/03/2018		2.67	0.28	6.92	23.4	5	2	8	0.04	1.00	25	50	50														

SW6-06 - Tabbimoble Overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW6-06	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/04/2018		0.40	0.20	6.81	21.8	10																				
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	18/05/2018		2.17	0.25	6.92	15.7	7	5	5	0.02	0.74	25	50	25													
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Slight sheen visible on surface. Weather fine.	14/06/2018	13:21	1.68	0.31	6.92	14.7	48																				
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	19/07/2018	13:42	8.89	0.49	7.28	11.1	3	1	3	0.04	0.53	30	250	250													
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	8/08/2018	12:45	4.77	0.50	7.53	12.8	4																				
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	21/09/2018	8:48	4.77	0.44	6.79	15.7	33	4	14	0.02	1.35	30	250	250													
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	2/10/2018	13:00	4.96	0.47	7.38	16.5	2																				
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	6/11/2018	14:10	6.97	0.61	7.17	27.3	15	1	4	0.02	0.72	30	100	50													
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	6/12/2018	13:15	4.33	0.53	6.97	21.8	4																				
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	10/01/2019	13:48	4.38	0.43	7.80	24.6	8	1	3	0.03	0.53	30	250	250													
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Tannins. Weather fine.	11/02/2019	13:08	3.68	0.45	7.84	24.7	6																				
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	13/03/2019	13:14	4.88	0.43	7.79	24.5	2	10	3	0.02	0.75	30	100	50													
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Fine.	10/04/2019	11:22	2.67	0.32	7.56	21.0	18																				
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	6/05/2019	12:26	2.91	0.37	7.64	18.0	0	1	12	0.01	0.44	30	100	50													
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	4/06/2019	13:35	3.42	0.42	7.81	13.5	5																				
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Drizzle.	4/07/2019	12:16	3.69	0.48	7.34	15.3	9	1	4	0.02	2.50	30	100	50													
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	13/08/2019	11:53	0.00	0.27	5.94	11.6	4																				
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Green algae. Weather fine.	5/09/2019	13:38	7.97	0.52	7.39	15.9	2	1	2	0.01	0.46	30	100	50													
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	1/10/2019	11:28	3.05	0.54	7.44	18.2	9																				
SW6-06	Not monitored in November 2019 due to risks associated with bushfires.																											

Dry Event Monitoring

[illegible]

SW6-06 - Tabbimoble Overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Section3 SW25		23/09/2013		3.31	0.16	7.04	20.2	14	3	14	0.03	0.73																
Section3 SW25		21/10/2013		2.09	0.20	6.56	23.9	15	3	11	0.04	0.91																
Section3 SW25		25/11/2013		4.64	0.25	5.76	24.5	31	3	15	0.02	0.80																
Section3 SW25		16/12/2013		1.94	0.16	5.32	23.2	18	5	9	0.25	0.30																
Upstream Monitoring																												
SW6-05	Photo taken	3/08/2016		0.00	0.18	6.99	13.3	10																				
SW6-05		8/09/2016		1.18	0.16	6.25	14.4	53	2	53	0.06	1.24	25	50	50													
SW6-05		10/10/2016		2.98	0.18	6.41	16.1	10																				
SW6-05		1/11/2016		0.57	0.19	7.07	20.3	4	1	7	0.05	1.25	25	50	50													
SW6-05	Low water level. Upstream and downstream points are disconnected.	14/12/2016		0.05	0.18	6.04	21.4	15																				
SW6-05	No visible flow. Upstream and downstream sites are disconnected. Heavy scum layer.	17/01/2017		0.23	0.16	6.44	23.4	18	2	32	0.12	1.70	25	50	50													
SW6-05	Very low water level, heavy scum layer, u/s and d/s sites not connected. No visible flow.	1/02/2017		0.46	0.15	6.37	24.4	23																				
SW6-05	Medium water level, gentle flow. Upstream and downstream sites connected.	3/03/2017		3.05	0.13	5.61	23.4	25	5	12	0.06	1.46	25	50	50													
SW6-05	No visible flow. U/s and d/s sites not connected. Drizzle	21/04/2017		7.78	0.14	6.12	18.9	25																				
SW6-05	Overcast weather. u/s and d/s not connected. No visible flow. Low water level. Lots of debris	10/05/2017		0.03	0.16	6.27	16.4	34	3	37	0.05	0.92	25	50	50													
SW6-05	Upstream and downstream sites not connected. No visible flow. Water level low to moderate. Weather fine.	9/06/2017		0.00	0.17	6.04	13.1	19																				
SW6-05	Upstream and downstream sites not connected. No visible flow. Mid water level. Dust layer on surface of water. Weather fine.	12/07/2017		1.16	0.13	5.79	12.2	26	1	30	0.05	0.73	25	50	50													
SW6-05	Upstream and downstream sites not connected. No visible flow. Low to mid water level. Dust layer on surface. Weather fine.	9/08/2017		1.90	0.16	6.40	10.1	10																				
SW6-05	Lack of erosion and sediment controls under current bridge. U/S and D/S not connected. No observed flow. Low water level. Replicate taken.	8/09/2017		0.30	0.17	5.94	11.7	6	1	12	0.04	0.69	25	50	50													
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Brown colour. Weather fine.	25/10/2017		0.69	0.14	6.20	17.3	32																				
SW6-05	Upstream and downstream sites not connected. Low water level, no visible flow. Overcast.	1/11/2017		0.46	0.15	6.44	18.8	19	4	38	0.10	1.44	25	50	50													
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	14/12/2017		0.00	0.10	6.19	21.2	20																				

SW6-06 - Tabbimoble Overflow

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	16/01/2018		0.00	0.13	6.24	20.8	21	4	34	0.14	1.32	25	50	50													
SW6-05	No connection between upstream and downstream points. No visible flow, very low water level. Tannin stained water. Weather fine.	20/02/2018		0.00	0.13	6.21	23.9	11																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	21/03/2018		0.72	0.11	6.47	21.9	5	2	13	0.08	1.19	25	50	50													
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/04/2018		0.00	0.13	6.43	21.0	19																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	18/05/2018		0.00	0.12	6.79	14.9	23	3	19	0.06	1.00	25	50	25													
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Dust layer on surface, green algae present. Weather fine.	14/06/2018	13:12	0.00	0.11	6.46	13.8	11																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	19/07/2018	13:27	0.00	0.12	7.55	10.3	12	2	12	0.09	0.56	30	250	250													
SW6-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/08/2018	12:35	0.00	0.11	7.60	11.2	11																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	21/09/2018	8:31	0.70	0.10	6.40	14.8	24	2	10	0.04	1.02	30	250	250													
SW6-05	Upstream and downstream sites not connected. Dust layer on surface. No visible flow, very low water level. Weather fine.	2/10/2018	12:52	2.06	0.11	7.66	17.7	8																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	6/11/2018	14:19	0.09	0.14	5.98	23.3	22	4	26	0.08	1.65	30	100	50													
SW6-05	Upstream and downstream sites connected. No visible flow, medium water level. Tannins. Weather fine.	6/12/2018	13:08	1.50	0.29	6.65	23.2	26																				
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Tannins and slight odour. Weather fine.	10/01/2019	14:00	1.63	0.19	7.25	26.0	6	1	10	0.07	1.06	30	250	250													
SW6-05	Upstream and downstream sites not connected. No visible flow, very low water level. Tannins. Weather fine.	11/02/2019	13:15	3.03	0.19	7.15	26.2	31																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Tannins, slight bacteria layer present. Weather fine.	13/03/2019	13:25	1.98	0.20	7.22	24.4	2	9	7	0.05	1.03	30	100	50													
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	10/04/2019	11:29	2.58	0.17	7.39	21.4	43																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	6/05/2019	12:40	0.41	0.18	7.37	17.5	29	1	7	0.01	0.45	30	100	50													
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	4/06/2019	13:27	0.26	0.23	7.65	12.7	37																				

SW6-06 - Tabbimoble Overflow

Dry Event Monitoring

[illegible]

SW6-06 - Tabbimoble Overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW6-06	Photo taken	5/08/2016		5.71	0.13	6.05	13.9	19																					
SW6-06		10/11/2016		0.29	0.19	6.44	21.1	8	3	11	0.07	1.40	25	50	50														
SW6-06	No flow from u/s. Moderate flow from other directions	6/01/2017		4.29	0.10	5.94	23.1	35																					
SW6-06	High water level, strong flow. U/S and D/S sites connected. Steady rain	28/02/2017		5.79	0.07	5.80	20.7	51	4	25	0.05	1.10	25	50	50														
SW6-06	No flow/ stagnant. Upstream and downstream sites not connected	6/03/2017		0.00	0.14	5.88	23.0	24																					
SW6-06	No visible flow, moderate water level. U/s and d/s sites connected.	6/04/2017		5.97	0.10	5.75	18.9	33	1	10	0.04	1.40	25	50	50														
SW6-06	Low flow. U/s and d/s sites not connected. Weather fine.	4/05/2017		2.42	0.15	6.43	17.7	19																					
SW6-06	Not safe to access due to high water level.	13/06/2017																											
SW6-06	Upstream and downstream sites not connected. No visible flow. Low water level. Weather fine.	17/07/2017		1.90	0.12	5.89	14.1	20																					
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	9/10/2017		2.59	0.19	6.87	19.6	33	4	26	0.08	1.18	25	50	50														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	7/11/2017		2.52	0.24	6.50	20.3	238																					
SW6-06	Upstream and downstream sites not connected. Low flow, high water level. Overcast.	1/12/2017		3.09	0.21	6.56	21.4	152	8	78	0.11	0.96	25	50	50														
SW6-06	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	3/01/2018		0.41	0.18	6.38	22.9	31																					
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	5/02/2018		1.13	0.25	6.77	21.3	17	1	15	0.07	1.12	25	50	50														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	7/03/2018		2.07	0.23	6.58	22.3	36																					
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	26/04/2018		0.86	0.21	6.91	19.6	18	1	10	0.05	0.92	30	250	250														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	10/05/2018		1.04	0.23	7.14	18.0	11																					
SW6-06	Upstream and downstream sites not connected. Low flow, medium water level. Overcast.	7/06/2018	11:39	5.61	0.18	6.81	14.9	175	3	62	0.09	0.71	30	250	250														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Drizzle.	5/07/2018	13:30	6.50	0.40	6.63	15.3	15																					
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	27/08/2018	9:52	6.14	0.47	7.49	12.2	43	1	16	0.02	0.50	30	250	250														
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	5/09/2018	13:04	5.92	0.74	6.46	14.6	80																					
SW6-06	Upstream and downstream sites not connected. No visible flow, medium water level. Drizzle.	12/10/2018	10:53	4.35	0.33	6.70	17.3	72	2	29	0.04	0.56	30	100	50														
SW6-06	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	19/11/2018	9:52	3.69	0.52	6.72	20.8	15																					

Wet Event Monitoring

P80 & P20 Values (calculated from baseline and upstream data below)

[illegible]

SW6-06 - Tabbimoble Overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
Section3 SW25		5/02/2013		3.52	0.28	5.87	24.2	18	3	31	0.01	0.80																
Section3 SW25		27/05/2013		5.02	0.16	6.63	16.6	30	3	17	0.03	0.70																
Section3 SW25		2/07/2013		9.23	0.18	6.37	15.7	37	3	3	0.03	0.81																
Section3 SW25		12/11/2013		4.74	0.17	6.20	22.7	13	3	3	0.02	1.00																
Upstream Monitoring																												
SW6-05	Photo taken	5/08/2016		6.50	0.14	6.10	13.6	16																				
SW6-05		10/11/2016		0.56	0.19	6.75	21.2	5	1	9	0.07	1.17	25	50	50													
SW6-05	No flow to d/s. Raining.	6/01/2017		4.87	0.14	6.65	23.6	21																				
SW6-05	High water level, strong flow. U/S and D/S sites connected. Steady rain	28/02/2017		6.26	0.10	5.83	20.7	32	2	14	0.04	1.02	25	50	50													
SW6-05	No flow/ stagnant. Upstream and downstream sites not connected	6/03/2017		0.00	0.14	5.89	23.3	22																				
SW6-05	Moderate water level, moderate flow. U/s and d/s sites connected	6/04/2017		6.34	0.10	5.70	18.8	31	1	11	0.04	1.34	25	50	50													
SW6-05	No visible flow. U/s and d/s sites not connected. Floating organic debris. Weather fine.	4/05/2017		1.35	0.15	6.20	17.5	20																				
SW6-05	Upstream and downstream sites connected. High flow. High water level. Partly cloudy.	13/06/2017		9.43	0.04	5.81	16.0	102	2	43	0.08	0.75	25	50	50													
SW6-05	Upstream and downstream sites not connected. No visible flow. Low water level. Weather fine.	17/07/2017		0.59	0.14	6.05	13.4	26																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	9/10/2017		1.60	0.16	6.82	20.0	9	2	13	0.08	0.90	25	50	50													
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	7/11/2017		0.60	0.14	6.02	19.6	39																				
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	1/12/2017		2.85	0.13	6.37	21.1	10	3	18	0.07	1.00	25	50	50													
SW6-05	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	3/01/2018		0.63	0.13	5.99	22.2	56																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	5/02/2018		0.00	0.13	6.23	20.6	13	3	19	0.09	1.28	25	50	50													
SW6-05	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	7/03/2018		0.00	0.12	6.23	22.0	8																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	26/04/2018		0.00	0.12	6.48	18.6	22	1	20	0.08	1.12	30	250	250													
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	10/05/2018		0.00	0.12	6.05	17.8	22																				

SW6-06 - Tabbimoble Overflow

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	7/06/2018	11:30	0.00	0.12	6.04	15.0	24	1	20	0.07	1.20	30	250	250													
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Rain.	5/07/2018	13:22	0.56	0.10	6.22	14.7	17																				
SW6-05	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	10:06	2.43	0.10	7.01	11.2	9	1	5	0.03	0.71	30	250	250													
SW6-05	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/09/2018	12:58	4.37	0.18	5.89	14.0	9																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Drizzle.	12/10/2018	10:45	2.58	0.10	6.53	17.7	24	1	11	0.05	1.27	30	100	50													
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	19/11/2018	9:46	0.00	0.15	6.00	20.2	25																				
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Rain.	18/12/2018	12:33	2.68	0.19	6.97	24.4	56	2	25	0.08	1.12	30	250	250													
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	25/02/2019	9:54	1.26	0.18	6.73	21.6	110																				
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	8/03/2019	9:41	1.87	0.19	6.85	21.8	22	1	9	0.05	0.97	30	100	50													
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	4/04/2019	12:24	1.06	0.15	6.69	20.1	142																				
SW6-05	Upstream and downstream sites not connected. Low flow, low water level. Drizzle.	26/06/2019	10:31	1.88	0.19	6.76	13.1	5	1	3	0.02	0.62	30	100	50													
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	5/07/2019	11:53	4.80	0.19	6.95	15.2	57																				
SW6-05	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	1/08/2019	12:05	0.00	0.19	6.82	12.9	2	3	7	0.03	0.53	30	100	50													
SW6-05	No access due to risks associated with recent bushfires.	13/01/2020	11:05																									
SW6-05	No access due to risks associated with recent bushfires.	5/02/2020	10:26																									
SW6-05	Unable to access due to risks associated with recent bushfires	7/03/2020	9:34																									
SW6-05	No access due to risks associated with recent bushfires.	11/04/2020	10:34																									
SW6-05	No access due to risks associated with recent bushfires.	10/06/2020	13:57																									
SW6-05	No access to due risks associated with recent bushfires.	8/08/2020	11:22																									
SW6-05	Upstream and downstream sites connected. High flow, high water level. Rain.	16/12/2020	12:19	5.02	0.13	5.67	23.7	58	3	14	0.06	0.75	30	100	50	2.741	0.001	0.0005	0.001	0.001	1.058	0.001	0.036	0.0003	0.001	0.001	0.0050	0.002
SW6-05	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	3/02/2021	11:57	3.92	0.19	6.64	23.6	25																				
SW6-05	Upstream and downstream sites connected. High flow, medium water level. Rain.	6/05/2021	11:05	5.77	0.06	7.05	16.8	116	1	23	0.05	0.68	15	50	50	11.900	0.001	0.0010	0.004	0.002	4.000	0.005	0.042	0.0001	0.003	0.001	0.0005	0.011

SW6-06 - Tabbimoble Overflow

Wet Event Monitoring

[illegible]

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Downstream Monitoring																												
SW7-02	Dry. Photo taken.	3/08/2016																										
SW7-02	Dry	8/09/2016																										
SW7-02	Dry	10/10/2016																										
SW7-02	Dry	2/11/2016																										
SW7-02	Dry	14/12/2016																										
SW7-02	Dry	17/01/2017																										
SW7-02	Dry	1/02/2017																										
SW7-02	No flow. No connection between upstream and downstream sites. Sample taken from small puddle.	3/03/2017		1.31	0.14	5.89	22.9	9	3	4	0.03	0.42	25	50	50													
SW7-02	Dry	21/04/2017																										
SW7-02	Dry	10/05/2017																										
SW7-02	Dry	9/06/2017																										
SW7-02	Dry	12/07/2017																										
SW7-02	Dry	3/08/2017																										
SW7-02	Fine weather. U/S and D/S not connected. Dry	8/09/2017																										
SW7-02	Upstream and downstream sites not connected. Stagnant pool with very low water level. Weather fine.	25/10/2017		6.64	0.16	7.00	19.0	23																				
SW7-02	Dry	1/11/2017																										
SW7-02	Insufficient water to sample. Weather fine.	14/12/2017																										
SW7-02	Dry - unable to sample. Weather fine.	16/01/2018																										
SW7-02	Dry - not sampled. Weather fine.	16/02/2018																										
SW7-02	Insufficient water to sample. Weather fine.	20/03/2018																										
SW7-02	Insufficient water to sample. Weather fine.	4/04/2018																										
SW7-02	Dry	18/05/2018																										
SW7-02	Waterway dry, not sampled. Weather fine.	14/06/2018	14:12																									
SW7-02	Dry, not sampled.	18/07/2018	10:10																									
SW7-02	Waterway dry, not sampled.	8/08/2018	14:08																									
SW7-02	Waterway dry, not sampled.	21/09/2018	9:48																									
SW7-02	Waterway dry, not sampled.	2/10/2018	14:06																									
SW7-02	Dry, not sampled.	7/11/2018	9:19																									
SW7-02	No visible flow, very low water level. Sampled in a small isolated pool of water. Overcast.	7/12/2018	9:10	2.54	0.39	6.94	19.2	37																				

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW7-02	Dry, not sampled.	11/01/2019	9:34																									
SW7-02	Dry, not sampled.	12/02/2019	12:53																									
SW7-02	Insufficient water to sample.	20/03/2019	10:04																									
SW7-02	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	10/04/2019	12:38	5.50	0.50	7.57	21.7	10																				
SW7-02	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	8/05/2019	9:27	3.05	0.64	7.38	14.3	0	2	5	0.01	0.30	30	100	50													
SW7-02	Insufficient water to sample.	5/06/2019	9:23																									
SW7-02	Upstream and downstream sites not connected. Medium flow, very low water level. Overcast.	8/07/2019	10:54	5.89	0.51	6.52	17.0	30	1	6	0.02	1.80	30	100	50													
SW7-02	Dry, not sampled.	13/08/2019	12:57																									
SW7-02	Dry, not sampled.	6/09/2019	10:10																									
SW7-02	Dry, not sampled.	1/10/2019	12:48																									
SW7-02	Not monitored in November 2019 due to risks associated with bushfires.																											
SW7-02	No access due to risks associated with recent bushfires.	17/12/2019																										
SW7-02	No access due to risks associated with recent bushfires.	13/01/2020	13:28																									
SW7-02	No visible flow, low water level. Evidence of recent flooding. Overcast.	17/02/2020	10:18	1.30	0.25	6.17	24.8	28																				
SW7-02	Insufficient water to sample.	4/03/2020	13:15																									
SW7-02	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	2/04/2020	12:39	5.67	0.51	7.56	25.9	13																				
SW7-02	No visible flow, very low water level. Weather fine. Green algae.	14/05/2020	9:39	7.87	0.59	7.47	18.1	25	1	8	0.27	1.77	30	100	50													
SW7-02	No visible flow, low water level. Weather fine. Sampled at culvert outlet as waterway was dry further downstream.	4/06/2020	11:44	10.89	0.65	7.34	15.1	9																				
SW7-02	Dry, not sampled.	17/11/2020																										
SW7-02	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Weather fine.	4/05/2021	10:42	5.56	0.30	6.67	20.1	11	1	4	0.03	0.29	30	100	50	0.288	0.001	0.0005	0.001	0.001	0.941	0.001	0.015	0.0003	0.001	0.001	0.0005	0.005
SW7-02	Unable to determine if connected. No visible flow. Medium water level. Drizzle.	24/11/2021	11:18	3.43	0.26	6.68	24.0	27	2	14	0.08	0.66	30	100	50	0.379	0.001	0.0015	0.001	0.002	2.014	0.001	0.099	0.0003	0.002	0.001	0.0015	0.020
SW7-02	Unable to determine if connected. No visible flow, medium water level. Overcast	20/05/2022	9:29	5.65	0.13	4.80	17.5	14	1	9	0.03	0.46	30	100	50	0.533	0.001	0.0005	0.001	0.001	1.634	0.001	0.029	0.0003	0.001	0.001	0.0005	0.016
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.11	6.55		29	3	34	0.08	1.40	30	196	50	0.516	0.001	0.0007	0.001	0.001	2.292	0.001	0.035	0.0003	0.001	0.002	0.0022	0.009

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
P20				0.44	0.07	5.70																							
St Dev					0.05	0.47																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW01-GDE01		3/04/2013		5.92	0.21	5.70	21.7	64	3	24	0.04	3.70	50	50	50	0.280	0.001	0.0001	0.001	0.001	0.270	0.001	0.013	0.0005	0.001	0.005	0.0005	0.008	
SW01-GDE01		29/04/2013		10.00	0.08	6.40	18.1	24	3	12	0.04	0.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SW01-GDE01	Dry	27/08/2013																											
SW01-GDE01	Dry	23/09/2013																											
SW01-GDE01	Dry	28/10/2013																											
SW01-GDE01		16/12/2013		7.90	0.37	5.70	23.6	11	3	3	0.01	1.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Upstream Monitoring																													
SW7-01	Photo taken	3/08/2016		1.72	0.11	6.52	14.0	11																					
SW7-01		8/09/2016		2.94	0.12	5.30	15.1	9	1	7	0.03	0.46	25	50	50														
SW7-01		10/10/2016		2.73	0.12	5.77	18.3	7																					
SW7-01		2/11/2016		1.26	0.13	6.28	19.6	11	7	24	0.07	0.95	25	50	50														
SW7-01	Low water level. No flow	14/12/2016		2.34	0.13	6.21	24.3	13																					
SW7-01	No flow. Stagnant pool, water stained black.	17/01/2017		0.51	0.10	6.27	23.6	8	1	8	0.05	0.58	25	50	50														
SW7-01	Low water level, sample taken in isolated pool, no visible flow, dark stain.	1/02/2017		1.47	0.11	6.47	24.4	7																					
SW7-01	Low water level, isolated pool. Upstream and downstream sites disconnected. No visible flow, dark stained.	3/03/2017		0.17	0.10	6.31	22.4	25	5	29	0.07	1.11	25	50	50														
SW7-01	No visible flow. Stagnant water. Overcast.	21/04/2017		1.07	0.11	5.70	18.8	14																					
SW7-01	Rain. No visible flow. Medium to high water level.	10/05/2017		1.64	0.10	5.78	17.0	19	1	13	0.03	0.49	25	50	50														
SW7-01	No visible flow. Water level moderate. Dark, tannin stained water. Weather fine.	9/06/2017		1.90	0.11	5.65	13.7	23																					
SW7-01	No visible flow. High water level. Dust layer on surface of water. Weather fine.	12/07/2017		2.88	0.11	5.60	13.0	15	2	10	0.03	0.31	25	50	50														
SW7-01	No connection between upstream and downstream sites. Stagnant pool with no visible flow. Low - mid water level. Weather fine.	9/08/2017		3.20	0.10	5.98	10.7	3																					
SW7-01	Fine weather. U/S and D/S not connected. No flow. Low water level.	8/09/2017		2.50	0.11	5.55	12.6	4	1	18	0.05	0.58	25	50	50														

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW7-02	Photo taken	5/08/2016		7.33	0.09	6.12	13.5	18																					
SW7-02	Dry	6/12/2016																											
SW7-02	Isolated stagnant pool (no connection to u/s point)	3/01/2017		4.30	0.16	6.64	23.6	21																					
SW7-02	Dry	27/02/2017																											
SW7-02	Steady rainfall, strong flow, localised flooding. Upstream and downstream sites connected	15/03/2017		7.55	0.03	5.86	21.9	135																					
SW7-02	Steady inflow. U/s and d/s monitoring sites likely connected.	5/04/2017		6.19	0.10	6.06	19.2	36	7	8	0.03	0.70	25	50	50														
SW7-02	Steady flow. Could not determine if u/s and d/s sites were connected. Weather fine.	4/05/2017		6.95	0.10	6.76	19.0	60																					
SW7-02	Upstream and downstream sites connected. High flow. Moderate to high water level. Sunny.	13/06/2017		9.01	0.04	5.61	17.2	43	4	10	0.04	0.37	25	50	50														
SW7-02	Dry	4/10/2017																											
SW7-02	Unable to determine if upstream and downstream sites connected. Medium flow, high water level. Weather fine.	7/11/2017		4.83	0.06	5.99	20.3	40	3	22	0.05	0.66	25	50	50														
SW7-02	Unable to determine connection. High flow, medium water level. Overcast.	1/12/2017		6.22	0.06	5.64	23.5	59																					
SW7-02	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	3/01/2018		3.58	0.23	7.07	22.3	44	3	18	0.03	0.46	25	50	50														
SW7-02	Dry, not sampled.	1/02/2018																											
SW7-02	Unable to determine if updrean and downstream sites were connected. High flow, low water level. Rain.	6/03/2018		5.81	0.12	6.63	22.8	42	3	14	0.05	0.56	25	50	50														
SW7-02	Dry	19/04/2018																											
SW7-02	Dry	10/05/2018																											
SW7-02	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Weather fine.	7/06/2018	12:40	5.72	0.38	6.90	17.6	215																					
SW7-02	Dry, not sampled.	27/08/2018	11:56																										
SW7-02	Unable to determine if upstream and downstream sites were connected. Very low flow, low water level. Turbidity exceeded maximum measuring range of probe. Overcast.	5/09/2018	10:44	8.16	0.32	5.50	14.0	800																					
SW7-02	Unable to determine if upstream and downstream sites were connected. Low flow, low water level. Overcast.	12/10/2018	11:36	5.19	0.37	7.08	17.3	275	1	92	0.04	2.80	30	100	50														
SW7-02	Upstream and downstream sites not connected. Sampled in isolated pool with no visible flow, very low water level. Overcast.	19/11/2018	10:50	1.69	0.53	6.69	19.0	132																					

Wet Event Monitoring

P80 & P20 Values (calculated from baseline and upstream data below)

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
P80					0.12	6.68		61	3	39	0.09	1.86	30	250	50	1.798	0.001	0.0007	0.001	0.001	1.145	0.001	0.033	0.0003	0.002	0.002	0.0022	0.011	
P20				1.06	0.06	5.79																							
St Dev					0.06	0.57																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW01-GDE01		31/01/2013		6.90	0.08	5.68	22.7	1	3	3	0.05	0.50	50	50	50	2.180	0.001	0.0001	0.001	0.001	0.920	0.001	0.045	0.0001	0.002	0.005	0.0005	0.022	
SW01-GDE01		28/02/2013		7.01	0.05	4.98	22.4	N/A	3	3	0.09	0.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SW01-GDE01		27/05/2013		7.60	0.23	6.40	13.3	56	3	31	0.05	8.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SW01-GDE01		4/07/2013		8.50	0.01	5.80	N/A	52	5	3	0.01	0.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SW01-GDE01		29/07/2013		8.00	0.21	6.00	19.1	24	3	8	0.01	4.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SW01-GDE01		19/11/2013		7.10	0.31	5.80	19.2	118	3	35	0.06	4.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SW01-GDE01		25/11/2013		7.90	0.18	6.90	22.0	83	3	42	0.08	1.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Upstream Monitoring																													
SW7-01	Photo taken	5/08/2016		6.74	0.10	6.31	13.2	19																					
SW7-01		6/12/2016		1.43	0.14	6.43	25.4	35	1	39	0.13	1.61	25	50	50														
SW7-01	Isolated stagnant pool. Dark grey/black staining	3/01/2017		0.63	0.12	6.57	23.5	72																					
SW7-01	Low water level, isolated pool, no visible flow, dark stained.	27/02/2017		1.56	0.12	6.70	21.3	21	3	40	0.23	2.66	25	50	50														
SW7-01	Steady rainfall, very strong flow, localised flooding. Upstream and downstream sites connected	15/03/2017		8.13	0.03	6.29	21.9	162																					
SW7-01	Steady inflow. U/s and d/s monitoring sites likely connected.	5/04/2017		5.24	0.11	6.12	18.5	35	1	9	0.04	0.66	25	50	50														
SW7-01	No visible flow. Could not determine if u/s and d/s sites connected. Overcast.	4/05/2017		2.26	0.11	5.88	17.6	18																					
SW7-01	Upstream and downstream sites connected. High flow. High water level. Surface foam and scum layer present. Overcast.	13/06/2017		9.11	0.04	5.67	17.3	45	1	8	0.04	0.36	25	50	50														
SW7-01	Upstream and downstream not connected. No visible flow. Very low water level, grey stain. Weather fine.	4/10/2017		0.90	0.11	6.89	17.1	44																					
SW7-01	Unable to determine if upstream and downstream sites connected. High flow, high water level. Weather fine.	7/11/2017		3.62	0.06	5.38	20.1	50	2	22	0.06	0.71	25	50	50														
SW7-01	Unable to determine connection. High flow, very high water level. Overcast.	1/12/2017		6.08	0.06	5.35	24.6	72																					

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW7-01	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	3/01/2018		2.01	0.08	5.97	23.4	18	2	37	0.04	0.64	25	50	50													
SW7-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	1/02/2018		0.00	0.11	7.35	22.0	20																				
SW7-01	Unable to determine if updreame and downstream sites were connected. Very low flow, medium water level. Rain.	6/03/2018		2.04	0.08	6.57	22.5	30	7	27	0.08	1.00	25	50	50													
SW7-01	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	19/04/2018		0.00	0.07	7.19	19.7	22																				
SW7-01	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	10/05/2018		0.00	0.07	6.54	17.5	40	7	43	0.08	1.13	30	250	250													
SW7-01	Upstream and downstream sites not connected. Intermittent waterway, sampled in large pool of water. No visible flow, low water level. Weather fine.	7/06/2018	13:00	3.78	0.06	6.39	14.8	25																				
SW7-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	11:10	2.16	0.05	7.11	13.2	25	1	32	0.08	1.70	30	250	250													
SW7-01	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	5/09/2018	11:11	2.58	0.13	5.79	13.9	46																				
SW7-01	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	12/10/2018	12:01	1.69	0.07	6.68	16.8	79	1	55	0.11	1.59	30	100	50													
SW7-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	19/11/2018	11:26	0.42	0.08	7.00	19.7	32																				
SW7-01	Sampled in a small unconnected pool of water. No visible flow, very low water level. Overcast.	18/12/2018	13:42	0.22	0.08	6.39	22.9	35	1	21	0.08	1.30	30	250	250													
SW7-01	Insufficient water to sample	25/02/2019	11:36																									
SW7-01	Insufficient water to sample.	8/03/2019	12:10																									
SW7-01	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Weather fine.	4/04/2019	10:28	1.31	0.05	5.88	19.1	62																				
SW7-01	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	17/05/2019	10:31	1.35	0.07	6.58	17.2	21	3	18	0.08	1.16	30	290	50													
SW7-01	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	25/06/2019	14:23	2.99	0.05	6.67	14.3	41																				
SW7-01	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	2/08/2019	7:57	0.00	0.08	6.31	12.4	57	1	104	0.17	1.94	30	400	50													
SW7-01	No access due to risks associated with recent bushfires.	11/12/2019																										
SW7-01	No access due to risks associated with recent bushfires.	18/01/2020	8:46																									
SW7-01	No access due to risks associated with recent bushfires.	5/02/2020	9:58																									
SW7-01	No access due to risks associated with recent bushfires	7/03/2020	10:23																									

SW7-02 - Unnamed tributary of Tabbimoble Swamp

Wet Event Monitoring

[illegible]

SW7-04 - Tabbimoble Floodway

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Disolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW7-04	Photo taken. Accurate turbidity reading could not be obtained.	3/08/2016		1.46	0.10	6.30	13.0																						
SW7-04		8/09/2016		5.44	0.10	5.52	14.6	21	1	21	0.06	0.91	25	50	50														
SW7-04		10/10/2016		3.23	0.11	5.90	17.0	12																					
SW7-04		2/11/2016		3.84	0.12	6.45	19.9	9	5	12	0.07	0.94	25	50	50														
SW7-04	Upstream and downstream points are disconnected.	14/12/2016		1.80	0.13	6.13	22.3	8																					
SW7-04	No flow.	17/01/2017		1.73	0.16	6.43	24.3	14	3	18	0.06	0.50	25	50	50														
SW7-04	U/s and d/s sites are connected, very slight flow. No upstream inflow.	1/02/2017		2.36	0.17	6.62	25.4	6																					
SW7-04	Upstream and downstream sites connected. No visible flow.	3/03/2017		3.48	0.17	6.34	23.1	36	2	21	0.04	0.77	25	50	50														
SW7-04	Very gentle flow. U/s and d/s sites connected. Overcast.	21/04/2017		4.27	0.09	5.69	19.0	24																					
SW7-04	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	23/05/2017		6.73	0.09	5.60	16.9	30	3	9	0.05	0.88	25	50	50														
SW7-04	Upstream and downstream sites connected. Very slight flow. Water level moderate. Weather fine.	9/06/2017		5.72	0.10	5.66	13.6	16																					
SW7-04	Upstream and downstream sites connected. No visible flow. Mid to high water level. Weather fine.	12/07/2017		6.75	0.09	5.53	12.4	23	1	11	0.05	0.60	25	50	50														
SW7-04	Upstream and downstream sites connected. No visible flow. Mid water level. Weather fine.	9/08/2017		5.58	0.09	5.89	10.3	5																					
SW7-04	Fine weather. U/S and D/S connected No observed flow. Low water level.	8/09/2017		5.80	0.10	5.22	12.4	5	1	15	0.05	0.74	25	50	50														
SW7-04	Upstream and downstream sites connected. Medium to high water level. No visible flow. Weather fine.	25/10/2017		5.19	0.15	6.42	18.6	13																					
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	1/11/2017		4.26	0.16	6.39	20.7	0	4	6	0.03	0.39	25	50	50														
SW7-04	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	14/12/2017		2.90	0.10	5.97	24.5	10																					
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Brown stained but lighter than upstream site. Weather fine.	16/01/2018		2.74	0.12	6.42	24.2	37	4	11	0.06	0.68	25	50	50														
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Tannin stained. Weather fine.	16/02/2018		4.44	0.15	6.63	26.8	12																					
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	20/03/2018		3.75	0.12	6.30	23.5	6	3	11	0.03	0.53	25	50	50														
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/04/2018		1.97	0.14	6.50	21.8	6																					
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/05/2018		3.18	0.14	6.78	18.6	10	2	11	0.03	0.39	30	250	250														

SW7-04 - Tabbimoble Floodway

Dry Event Monitoring

[illegible]

SW7-04 - Tabbimoble Floodway

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Tannins. Slight dust layer. Weather fine.	12/02/2019	13:28	3.32	0.22	7.21	26.3	7																				
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	20/03/2019	10:50	4.39	0.34	6.97	23.2	11	1	4	0.01	1.03	30	100	50													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Surface sheen present at SW7-03 - samples taken for oil and grease and hydrocarbon analysis. Weather fine.	10/04/2019	13:38	3.37	0.32	7.05	21.6	34	1	6	0.02	0.58	30	100	50													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Fine.	8/05/2019	10:40	3.97	0.35	7.03	16.5	1	1	3	0.01	0.23	30	100	50													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/06/2019	9:52	5.29	0.34	7.02	12.5	7																				
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	8/07/2019	11:59	4.95	0.33	6.58	15.6	33	1	8	0.02	2.22	30	100	50													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	13/08/2019	13:07	1.71	0.35	6.77	11.7	3																				
SW7-04	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	6/09/2019	9:56	5.65	0.35	6.88	14.5	3	1	25	0.01	0.33	30	100	50													
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	1/10/2019	13:20	4.09	0.35	6.96	18.4	9																				
SW7-04	Not monitored in November 2019 due to risks associated with bushfires.																											
SW7-04	No access due to risks associated with recent bushfires.	17/12/2019																										
SW7-04	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	13/01/2020	13:04	0.00	0.41	7.59	23.9	4	4	5	0.03	0.51	30	400	50													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Evidence of recent flooding. Overcast.	17/02/2020	10:31	2.74	0.12	5.93	26.1	6																				
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Surface scum. Weather fine.	4/03/2020	13:24	3.17	0.16	6.43	25.8	3	3	10	0.11	1.62	30	100	50													
SW7-04	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Drizzle.	2/04/2020	13:08	3.16	0.21	6.86	22.1	9																				
SW7-04	No visible flow, medium water level. Weather fine.	14/05/2020	9:53	4.62	0.22	6.98	16.6	7	1	3	0.03	0.52	30	100	50													
SW7-04	No visible flow, medium water level. Weather fine.	4/06/2020	11:54	6.10	0.28	7.12	14.6	5																				
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/11/2020	8:53	6.21	0.23	6.71	25.3	12	2	3	0.02	0.44	30	100	50	0.106	0.001	0.0005	0.001	0.001	0.412	0.001	0.017	0.0003	0.001	0.001	0.0050	0.001
SW7-04	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	4/05/2021	11:36	3.67	0.15	6.40	18.0	12	5	8	0.04	0.48	30	100	50	0.304	0.001	0.0005	0.001	0.001	1.384	0.001	0.024	0.0003	0.001	0.001	0.0005	0.005
SW7-04	Upstream and downstream connected. No visible flow. Medium water level. Overcast.	23/11/2021	13:11	5.36	0.10	6.34	22.2	20	3	14	0.04	0.58	30	100	50	0.593	0.001	0.0015	0.001	0.002	1.374	0.001	0.044	0.0003	0.001	0.002	0.0015	0.008

SW7-04 - Tabbimoble Floodway

Dry Event Monitoring

[illegible]

SW7-04 - Tabbimoble Floodway

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Disolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Upstream Monitoring																												
SW7-03	Suggest move site to other side of track. Photo taken.	3/08/2016		6.51	0.09	6.63	13.4	4																				
SW7-03		8/09/2016		4.06	0.11	5.62	14.9	29	1	15	0.05	0.56	25	50	50													
SW7-03		10/10/2016		6.49	0.11	5.93	16.6	21																				
SW7-03		2/11/2016		3.72	0.13	6.70	19.1	27	6	32	0.09	1.01	25	50	50													
SW7-03	Upstream and downstream points are disconnected. Low water level.	14/12/2016		6.79	0.15	6.18	24.2	3																				
SW7-03	No flow, water stained black.	17/01/2017		1.71	0.17	6.55	25.1	7	2	13	0.05	0.58	25	50	50													
SW7-03	U/s and d/s sites are connected, very slight flow. Black stain. No upstream inflow.	1/02/2017		1.44	0.18	6.72	25.6	6																				
SW7-03	Upstream and downstream sites connected. No visible flow. Black stain.	3/03/2017		3.20	0.18	6.43	24.1	8	4	5	0.03	1.74	25	50	50													
SW7-03	Very gentle flow (no upstream inflow). U/s and d/s sites connected. Overcast.	21/04/2017		5.38	0.09	5.87	18.9	24																				
SW7-03	Upstream and downstream sites connected. Low water level, no visible flow. Weather fine.	23/05/2017		7.70	0.09	5.64	16.1	29	1	8	0.05	0.90	25	50	50													
SW7-03	Upstream and downstream sites connected. Very slight flow. Water level moderate. Weather fine.	9/06/2017		6.74	0.09	5.84	13.8	15																				
SW7-03	Upstream and downstream sites connected. No visible flow. Mid to high water level. Weather fine.	12/07/2017		7.54	0.09	5.65	12.3	24	1	8	0.05	0.59	25	50	50													
SW7-03	Upstream and downstream sites connected. No visible flow. Mid water level. Weather fine.	9/08/2017		6.71	0.09	6.13	9.8	4																				
SW7-03	Fine weather. U/S and D/S connected. No observed flow. Low water level.	8/09/2017		7.13	0.10	5.67	13.2	4	1	8	0.05	0.64	25	50	50													
SW7-03	Upstream and downstream sites connected. Medium to high water level. No visible flow. Weather fine.	25/10/2017		5.24	0.10	6.44	18.9	9																				
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	1/11/2017		4.09	0.11	6.59	20.3	0	2	3	0.03	0.47	25	50	50													
SW7-03	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	14/12/2017		8.67	0.09	5.94	25.4	9																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Dark brown colour. Weather fine.	16/01/2018		2.90	0.09	6.44	22.6	11	6	10	0.07	0.79	25	50	50													
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Water dark - tannin stained. Weather fine.	16/02/2018		0.87	0.14	6.50	27.0	37																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	20/03/2018		2.25	0.10	6.32	23.5	6	2	23	0.04	0.71	25	50	50													
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/04/2018		1.59	0.11	6.59	21.6	2																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/05/2018		2.01	0.12	6.95	17.6	1	4	5	0.03	0.46	30	250	250													

SW7-04 - Tabbimoble Floodway

Dry Event Monitoring

[illegible]

SW7-04 - Tabbimoble Floodway

Dry Event Monitoring

[illegible]

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW7-04	Flowing very fast. Photo taken.	4/08/2016		7.76	0.08	6.28	14.7	11																					
SW7-04	Upstream and downstream points are disconnected.	6/12/2016		4.10	0.12	6.60	24.9	13	1	11	0.05	0.84	25	50	50														
SW7-04	Continuous connection to u/s site. No visible flow.	3/01/2017		3.38	0.16	6.35	24.8	81																					
SW7-04	U/S and D/S connected. Slight flow visible.	27/02/2017		1.66	0.18	6.71	22.2	16	3	9	0.02	0.63	25	50	50														
SW7-04	Gentle rainfall, steady flow. Upstream and downstream sites connected. Observed sediment laden water discharging from construction site, both north and south of waterway.	15/03/2017		6.65	0.09	6.48	22.7	212																					
SW7-04	Steady inflow. Indications of recent flood event. U/s and d/s sites connected.	5/04/2017		6.39	0.07	5.59	18.8	23	2	8	0.03	1.03	25	50	50														
SW7-04	No visible flow. U/s and d/s sites connected. Weather fine.	4/05/2017		5.03	0.09	5.75	17.6	23																					
SW7-04	Not safe to access due to very high, fast flowing water.	13/06/2017																											
SW7-04	Vegetation and sediment build-up appears to be blocking connection between upstream and downstream sites. No visible flow. Medium water level, grey stain. Weather, fine.	4/10/2017		4.60	0.09	6.27	17.3	13																					
SW7-04	Upstream and downstream sites connected. Low flow, medium water level. Weather, fine.	7/11/2017		5.60	0.07	5.65	20.3	27	1	15	0.06	0.84	25	50	50														
SW7-04	Upstream and downstream sites connected. Slight flow, high water level. Drizzle.	1/12/2017		5.76	0.09	5.74	23.1	18																					
SW7-04	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	3/01/2018		3.38	0.12	6.38	24.5	67	4	37	0.07	0.55	25	50	50														
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	1/02/2018		2.69	0.13	6.73	23.4	13																					
SW7-04	Upstream and downstream sites connected. Very low flow, high water level. Rain.	6/03/2018		4.70	0.16	6.51	23.7	78	4	28	0.06	0.47	25	50	50														
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	19/04/2018		3.27	0.13	6.84	20.3	3																					
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	10/05/2018		3.10	0.14	6.74	18.4	10	2	11	0.03	0.38	30	250	250														
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	7/06/2018	13:19	5.23	0.17	6.75	14.5	110																					
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	27/08/2018	11:39	6.47	0.21	7.11	11.7	14	2	1	0.02	0.27	30	250	250														
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/09/2018	11:46	6.36	0.43	6.34	14.2	161																					
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	12/10/2018	12:49	6.75	0.22	6.98	17.9	52	1	14	0.03	0.59	30	100	50														
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	19/11/2018	11:51	2.72	0.13	6.73	21.3	26																					

SW7-04 - Tabbimoble Floodway

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	18/12/2018	14:10	2.71	0.19	6.72	24.0	51	1	25	0.05	0.75	30	250	250													
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Rain.	25/02/2019	11:49	2.75	0.22	7.22	22.4	8																				
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	8/03/2019	11:32	3.67	0.22	7.13	22.9	8	6	3	0.01	0.46	30	100	50													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/04/2019	10:50	3.73	0.31	6.59	20.2	233																				
SW7-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/05/2019	10:59	3.94	0.35	6.77	16.8	0	2	1	0.02	0.21	30	100	50													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	25/06/2019	14:59	6.95	0.37	6.91	14.0	47																				
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	2/08/2019	8:24	0.11	0.36	6.63	12.3	7	6	4	0.04	0.74	30	100	50													
SW7-04	No access due to risks associated with recent bushfires.	11/12/2019																										
SW7-04	Upstream and downstream sites connected. Medium flow, high water level. Rain.	18/01/2020	8:53	6.32	0.28	7.13	23.7	502	2	91	0.13	0.49	400	350	50													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Strong odour, ash, green algae, surface bacteria. Overcast.	5/02/2020	9:35	0.00	0.24	6.39	23.8	209																				
SW7-04	Upstream and downstream sites connected. High flow, very high water level. Overcast.	7/03/2020	10:29	5.53	0.07	6.38	24.5	81	2	20	0.07	0.53	30	100	50													
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	11/04/2020	11:45	2.63	0.22	6.92	21.3	19																				
SW7-04	Very low flow, medium water level. Weather fine.	18/05/2020	8:38	7.01	0.28	6.86	17.2	78	2	18	0.04	1.63	30	100	50													
SW7-04	No visible flow, medium water level. Weather fine.	11/06/2020	8:56	7.35	0.25	6.83	17.1	100																				
SW7-04	No visible flow, medium water level. Weather fine.	17/08/2020	10:58	5.88	0.14	5.78	14.6	42																				
SW7-04	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	15/12/2020	13:32	6.35	0.12	6.15	23.6	51	2	20	0.06	0.44	30	100	50	2.498	0.001	0.0005	0.001	0.001	0.910	0.001	0.014	0.0003	0.001	0.001	0.0050	0.020
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/02/2021	13:07	2.82	0.15	6.71	25.1	6																				
SW7-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	6/05/2021	14:55	5.49	0.08	6.30	18.6	32	1	9	0.04	0.66	30	100	50	0.479	0.001	0.0005	0.001	0.001	0.679	0.001	0.016	0.0003	0.001	0.001	0.0005	0.002
SW7-04	Upstream and downstream connected. No visable flow. Low water level. Weather fine.	9/11/2021	11:52	5.66	0.11	6.06	20.9	15	2	10	0.04	0.70	30	100	50	0.915	0.001	0.0015	0.001	0.001	0.800	0.002	0.019	0.0003	0.001	0.001	0.0015	0.010
SW7-04	Upstream and downstream sites connected. High flow, high water level. Overcast.	16/05/2022	13:19	8.73	0.06	5.08	21.6	18	1	5	0.03	0.65	30	100	50	1.505	0.001	0.0005	0.001	0.001	0.950	0.001	0.011	0.0003	0.001	0.001	0.0005	0.009
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.22	6.89		36	3	14	0.05	0.85	30	100	50	1.516	0.001	0.0007	0.001	0.002	0.939	0.001	0.041	0.0003	0.001	0.002	0.0022	0.008

Wet Event Monitoring

SW7-04 - Tabbimoble Floodway

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	1/02/2018		2.81	0.11	6.87	23.2	9																				
SW7-03	Upstream and downstream sites connected. Very low flow, high water level. Rain.	6/03/2018		3.66	0.11	6.20	22.7	24	2	4	0.04	0.55	25	50	50													
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	19/04/2018		2.39	0.11	6.97	20.3	1																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	10/05/2018		3.25	0.15	6.79	18.1	9	1	9	0.03	0.60	30	250	250													
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	7/06/2018	13:14	5.85	0.19	6.91	14.2	14																				
SW7-03	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	27/08/2018	11:32	5.05	0.22	7.23	11.7	13	2	3	0.03	0.34	30	250	250													
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/09/2018	11:40	5.46	0.41	6.40	14.3	17																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	12/10/2018	12:42	3.17	0.24	7.00	17.3	14	2	12	0.03	0.58	30	100	50													
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	19/11/2018	11:48	2.80	0.14	6.94	21.5	28																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	18/12/2018	14:04	1.94	0.18	6.63	24.9	35	1	14	0.05	0.73	30	250	250													
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Rain.	25/02/2019	11:53	2.79	0.25	7.19	21.5	4																				
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Tannins present. Overcast.	8/03/2019	11:26	1.92	0.25	7.09	22.7	6	29	2	0.02	0.73	30	100	50													
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/04/2019	10:47	1.85	0.19	6.49	19.7	128																				
SW7-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/05/2019	10:53	4.84	0.25	6.84	17.3	0	3	3	0.01	0.28	30	100	50													
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	25/06/2019	14:54	6.19	0.24	6.87	12.8	2																				
SW7-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	2/08/2019	8:30	1.70	0.31	6.82	12.5	1	1	2	0.01	0.46	30	100	50													
SW7-03	No access due to risks associated with recent bushfires.	11/12/2019																										
SW7-03	No access due to risks associated with recent bushfires.	18/01/2020	8:48																									
SW7-03	No access due to risks associated with recent bushfires.	5/02/2020	9:35																									
SW7-03	No access due to risks associated with recent bushfires	7/03/2020	10:28																									
SW7-03	No access due to risks associated with recent bushfires.	11/04/2020	11:46																									
SW7-03	No access due to risks associated with recent bushfires.	18/05/2020	8:46																									
SW7-03	No access due to risks associated with recent bushfires.	11/06/2020	8:55																									

SW7-04 - Tabbimoble Floodway

Wet Event Monitoring

[illegible]

Dry Event Monitoring

Downstream Monitoring

Dry Event Monitoring

Dry Event Monitoring

SW7-06 - Oakey Creek

Dry Event Monitoring

SW7-06 - Oakey Creek

Dry Event Monitoring

[illegible]

Dry Event Monitoring

Upstream Monitoring

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

Wet Event Monitoring

SW7-06	No wet weather access	4/08/2016																										
SW7-06		7/12/2016		2.74	0.17	6.68	25.1	28	1	10	0.05	0.76	25	50	50													
SW7-06	No visible flow	3/01/2017		3.32	0.11	6.58	25.3	14																				
SW7-06	No visible flow	27/02/2017		2.93	0.17	6.81	22.1	8	1	6	0.04	1.02	25	50	50													
SW7-06	High water level. Steady flow.	15/03/2017		5.40	0.06	6.40	22.8	15																				
SW7-06	Not safe to access - flooding	5/04/2017																										
SW7-06	High water level, moderate flow. Overcast	4/05/2017		3.77	0.14	7.02	18.2	11																				
SW7-06	Not safe to access due to high water.	13/06/2017																										
SW7-06	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/10/2017		3.48	0.13	6.50	18.1	15																				
SW7-06	Upstream and downstream sites connected. No visible flow, high water level. Weather, fine.	7/11/2017		1.72	0.08	5.57	21.1	20	1	8	0.07	1.17	25	50	50													
SW7-06	No access - high water over access route.	1/12/2017																										
SW7-06	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	3/01/2018		1.35	0.11	6.54	23.3	9	1	10	0.05	0.60	25	50	50													
SW7-06	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	1/02/2018		2.90	0.12	6.82	23.8	11																				
SW7-06	No wet weather access to site.	6/03/2018																										
SW7-06	No access - high risk clearing works	19/04/2018																										
SW7-06	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	10/05/2018		1.99	0.10	6.55	19.1	7	6	4	0.03	0.47	30	250	250													
SW7-06	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	7/06/2018	13:48	5.72	0.09	6.82	15.1	9																				
SW7-06	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	27/08/2018	12:19	6.38	0.10	6.88	11.6	13	2	3	0.03	0.49	30	250	250													
SW7-06	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	5/09/2018	10:07	6.30	0.16	6.01	14.2	26																				
SW7-06	No visible flow, medium water level. Overcast.	12/10/2018	13:19	4.20	0.09	6.75	17.9	19	1	13	0.05	0.98	30	100	50													
SW7-06	No visible flow, medium water level. Overcast.	19/11/2018	12:13	2.44	0.13	6.73	21.6	8																				
SW7-06	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	18/12/2018	15:16	1.93	0.13	6.78	26.4	32	1	11	0.05	0.78	30	250	250													
SW7-06	No visible flow, low water level. Drizzle.	22/02/2019	12:40	4.87	0.16	7.49	23.6	47																				
SW7-06	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	8/03/2019	12:52	3.15	0.34	6.87	23.7	166	2	84	0.04	2.95	30	100	50													
SW7-06	Unable to determine whether upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	4/04/2019	8:57	4.47	0.24	6.49	19.7	344																				

Wet Event Monitoring

P80 & P20 Values (calculated from baseline and upstream data below)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
P80					0.18	6.74		47	3	19	0.07	0.95	30	250	90	1.142	0.001	0.0007	0.001	0.001	1.291	0.001	0.113	0.0003	0.001	0.002	0.0022	0.006	
P20				1.53	0.10	5.91																							
St Dev					0.04	0.62																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW03		31/01/2013		N/A	0.18	N/A	N/A	N/A	3	3	0.01	0.70	50	50	50	0.580	0.001	0.0001	0.001	0.001	0.580	0.001	0.120	0.0001	0.001	0.005	0.0005	0.012	
SW03		28/02/2013		0.37	0.13	5.60	23.7	N/A	3	3	0.11	0.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SW03		27/05/2013		6.80	0.14	5.85	14.2	9	3	3	0.05	0.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SW03		4/07/2013		7.60	0.11	6.70	n/a	N/A	3	3	0.01	0.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SW03		29/07/2013		4.20	0.19	6.10	14.8	17	3	3	0.01	0.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SW03		19/11/2013		4.00	0.16	6.20	19.1	27	3	5	0.02	1.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SW03		25/11/2013		5.10	0.16	4.40	23.4	46	3	22	0.05	1.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Upstream Monitoring																													
SW7-05	Not safe to access	4/08/2016																											
SW7-05	Not safe to access	7/12/2016																											
SW7-05	Not safe to access	3/01/2017																											
SW7-05	Not safe to access	27/02/2017																											
SW7-05	Not safe to access	15/03/2017																											
SW7-05	Not safe to access	5/04/2017																											
SW7-05	Not safe to access	4/05/2017																											
SW7-05	Not safe to access	13/06/2017																											
SW7-05	Upstream and downstream sites connected. No visible flow, low water level. Sampled within pool - waterway is dry further upstream. Weather fine.	4/10/2017		1.00	0.13	6.46	17.9	13																					
SW7-05	No access - water too high	7/11/2017																											
SW7-05	No access - high water over access route.	1/12/2017																											
SW7-05	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	3/01/2018		0.25	0.09	6.68	23.5	9	2	11	0.05	0.52	25	50	50														
SW7-05	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	1/02/2018		0.49	0.13	6.61	23.7	22																					

Wet Event Monitoring

[illegible]

Wet Event Monitoring

[illegible]

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Dry Event Monitoring

[illegible]

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible][illegible]

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Dry Event Monitoring

[illegible]

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Dry Event Monitoring

[illegible]

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW7-07	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/05/2018		0.00	0.33	7.49	17.0	0	1	3	0.04	0.83	30	250	250													
SW7-07	Could not make contact with landowner, no access.	15/06/2018																										
SW7-07	No access. Could not get in contact with landowner, left voicemail messages.	18/07/2018	11:15																									
SW7-07	No visible flow, very low water level. Sampled in a medium pool of water, waterway dry further upstream. Weather fine.	8/08/2018	15:50	1.18	0.31	7.01	11.9	3																				
SW7-07	Upstream and downstream sites connected. No visible flow, low water level. Waterbody dry further upstream. Weather fine.	21/09/2018	12:01	4.21	0.39	7.13	15.9	12	2	1	0.04	1.61	30	250	250													
SW7-07	Upstream and downstream sites connected. No visible flow, low water level. Waterway dry further upstream. Weather fine.	2/10/2018	15:46	2.75	0.40	7.23	16.5	1																				
SW7-07	Could not make contact with landowner, no access.	7/11/2018	13:55																									
SW7-07	No visible flow, medium water level. Tannins. Rain.	7/12/2018	11:35	0.33	0.44	7.14	19.2	4																				
SW7-07	Unable to make contact with landowner.	11/01/2019	12:53																									
SW7-07	Unable to make contact with landowner.	12/02/2019	14:11																									
SW7-07	Unable to make contact with landowner.	20/03/2019	11:52																									
SW7-07	No visible flow, very low water level. Weather fine.	10/04/2019	15:08	1.13	0.31	6.63	21.1	6																				
SW7-07	No visible flow, very low water level. Weather fine.	8/05/2019	12:19	1.89	0.40	7.31	16.8	0	1	3	0.06	3.03	30	100	50													
SW7-07	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	5/06/2019	11:16	1.55	0.42	7.45	12.6	4																				
SW7-07	No access, could not make contact with landowner.	8/07/2019																										
SW7-07	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	13/08/2019	14:12	0.00	0.38	6.47	13.0	1																				
SW7-07	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	6/09/2019	11:39	0.00	0.40	6.71	13.9	0	1	1	0.10	1.46	30	220	50													
SW7-07	No access, unable to make contact with landowner.	1/10/2019																										
SW7-07	Not monitored in November 2019 due to risks associated with bushfires.																											
SW7-07	Insufficient water to monitor.	17/12/2019	17:15																									
SW7-07	Dry, not sampled.	13/01/2020	14:25																									
SW7-07	No access, unable to make contact with landowner.	17/02/2020	11:21																									
SW7-07	Unable to make contact with landowner.	4/03/2020	14:00																									
SW7-07	Unable to make contact with landowner.	2/04/2020	13:52																									
SW7-07	Dry, not sampled.	14/05/2020	10:56																									

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Dry Event Monitoring

[illegible]

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Wet Event Monitoring

[illegible]

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW7-08	Upstream and downstream sites connected. Waterway dry at designated sample point and downstream of works area, sampled within works area. No visible flow, low water level. Overcast.	12/10/2018	14:16	3.14	0.39	6.50	18.4	130	1	56	0.06	3.49	30	100	50													
SW7-08	Dry, not sampled.	20/10/2018	14:00																									
SW7-08	Dry, not sampled.	18/12/2018	15:46																									
SW7-08	No visible flow, low water level. Sampled within works area, waterway dry further downstream. Overcast.	25/02/2019	13:29	7.67	0.49	7.15	24.6	121																				
SW7-08	No visible flow, medium water level. Overcast. Sampled within works area as waterway dry downstream.	8/03/2019	13:50	5.84	0.61	6.58	23.2	673	1	287	0.06	4.19	30	100	50													
SW7-08	No visible flow, low water level. Weather fine.	4/04/2019	8:28	5.91	0.38	6.33	19.3	401																				
SW7-08	Insufficient water to sample.	17/05/2019	12:20																									
SW7-08	Upstream and downstream sites not connected. Low flow, medium water level. Turbidity exceeded maximum measuring range of probe. Drizzle.	25/06/2019	11:57	9.10	0.30	7.87	14.7	>800																				
SW7-08	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	2/08/2019	10:44	4.25	0.77	7.32	15.6	19	18	11	0.08	8.00	30	580	50													
SW7-08	Insufficient water to monitor.	11/12/2019	15:20																									
SW7-08	Upstream and downstream sites not connected. Medium flow, high water level. Turbidity exceeded maximum measurement range. Rain.	18/01/2020	9:50	7.88	0.15	7.20	22.9	>1000	4	552	0.42	0.92	50	100	50													
SW7-08	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/02/2020	9:00	2.09	0.98	7.09	23.4	59																				
SW7-08	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	7/03/2020	11:28	2.29	0.14	4.62	24.0	14	6	3	0.03	1.09	30	100	50													
SW7-08	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	11/04/2020	12:36	4.11	0.16	5.37	22.0	10																				
SW7-08	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	18/05/2020	9:46	8.12	0.23	6.95	18.4	557	5	187	0.16	1.28	30	100	50													
SW7-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	11/06/2020	9:52	4.61	0.18	5.75	16.4	56																				
SW7-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	17/08/2020	12:25	6.22	0.20	6.16	14.9	55																				
SW7-08	Upstream and downstream sites connected. Very high flow, very high water level. Weather fine.	15/12/2020	14:33	5.40	0.11	4.97	23.6	29	5	11	0.04	0.71	30	100	50	1.793	0.001	0.0005	0.001	0.001	0.568	0.001	0.027	0.0003	0.001	0.001	0.0050	0.003
SW7-08	No visible flow, medium water level. Weather fine.	3/02/2021	13:29	6.17	0.38	7.65	26.5	17																				
SW7-08	Upstream and downstream sites connected. No visible flow, high water level. Overcast.	6/05/2021	15:17	5.00	0.12	5.84	18.3	12	1	5	0.03	1.05	30	100	50	1.263	0.001	0.0005	0.001	0.001	1.719	0.001	0.044	0.0003	0.001	0.001	0.0005	0.014

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW7-08	Upstream and downstream connected. No visible flow. Low water level. Weather fine.	9/11/2021	12:37	3.64	0.44	7.04	23.1	29	3	37	0.12	1.80	30	100	50	0.801	0.001	0.0015	0.001	0.003	2.240	0.001	1.179	0.0003	0.002	0.001	0.0015	0.020
SW7-08	Upstream and downstream sites connected. Very flow, high water level. Overcast. Monitored within works area.	16/05/2022	14:03	8.43	0.09	4.40	22.0	9	2	5	0.03	1.06	30	100	50	1.217	0.001	0.0005	0.001	0.001	2.320	0.001	0.047	0.0003	0.001	0.001	0.0005	0.007
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.39	7.16		15	3	13	0.05	1.20	30	240	50	1.590	0.001	0.0005	0.002	0.001	1.978	0.001	0.052	0.0003	0.007	0.003	0.0023	0.007
P20				0.71	0.14	4.52																						
St Dev					0.15	1.28																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW04		31/01/2013		N/A	0.18	N/A	N/A	N/A	3	3	0.01	0.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW04		28/02/2013		0.50	0.11	4.59	22.2	N/A	3	3	0.01	1.30	50	50	50	1.230	0.001	0.0001	0.001	0.001	1.270	0.001	0.072	0.0001	0.001	0.005	0.0005	0.003
SW04		27/05/2013		6.63	0.16	4.30	13.7	10	5	3	0.02	0.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW04		4/07/2013		7.80	0.11	4.60	n/a	7	3	16	0.02	0.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW04		29/07/2013		3.10	0.15	4.80	15.3	18	3	39	0.08	0.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW04	Dry	19/11/2013																										
SW04	Dry	25/11/2013																										
Upstream Monitoring																												
SW7-07	Site could not be accessed	4/08/2016																										
SW7-07	Site could not be accessed	7/12/2016																										
SW7-07	Site could not be accessed	3/01/2017																										
SW7-07	Site could not be accessed	27/02/2017																										
SW7-07	Site could not be accessed	15/03/2017																										
SW7-07	Site could not be accessed	5/04/2017																										
SW7-07	Site could not be accessed	4/05/2017																										
SW7-07	Site could not be accessed	13/06/2017																										
SW7-07	Upstream and downstream sites not connected, sampled within small pool. No visible flow, very low water level. Weather fine.	4/10/2017		1.85	0.21	6.84	16.6	15																				

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW7-07	Upstream and downstream sites connected. Low flow. High water level. Weather, fine.	7/11/2017		3.32	0.19	4.74	19.3	2	1	3	0.03	0.75	25	50	50													
SW7-07	Upstream and downstream sites connected but dry further upstream. Water low and pooling, no visible flow. Overcast.	1/12/2017		1.68	0.25	6.39	20.3	3																				
SW7-07	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	3/01/2018		1.99	0.29	6.95	22.1	1	1	3	0.04	0.54	25	50	50													
SW7-07	Upstream and downstream sites not connected. No visible flow, very low water level. Waterway dry further upstream of sample point. Overcast.	1/02/2018		0.15	0.33	7.20	21.1	8																				
SW7-07	Upstream and downstream sites connected. No visible flow, very low water level. Waterway dry further upstream. Rain.	6/03/2018		0.36	0.34	7.04	22.0	11	2	2	0.04	0.62	25	50	50													
SW7-07	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	19/04/2018		0.00	0.32	7.36	19.0	5																				
SW7-07	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	10/05/2018		0.87	0.31	7.22	17.5	1	1	7	0.04	0.67	30	250	250													
SW7-07	Unable to access - left message with landowner but did not gain permission to access property.	7/06/2018																										
SW7-07	Sampled in a very shallow pool of water with no visible flow. Weather fine.	27/08/2018	13:19	0.96	0.32	7.24	11.1	5	1	1	0.02	0.53	30	250	250													
SW7-07	Upstream and downstream sites connected. No visible flow, very low water level. Waterway dry further upstream. Overcast.	5/09/2018	8:20	2.95	0.58	6.43	13.7	1																				
SW7-07	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	12/10/2018	14:43	2.61	0.41	6.75	18.1	58	1	32	0.06	2.72	30	100	50													
SW7-07	No visible flow, low water level. Overcast.	19/11/2018	13:25	0.85	0.50	7.11	19.1	18																				
SW7-07	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	18/12/2018	15:57	0.23	0.43	7.13	21.9	6	1	2	0.12	0.89	30	250	250													
SW7-07	No access, unable to make contact with landowner.	22/02/2019	12:18																									
SW7-07	No access, unable to make contact with landowner.	8/03/2019	13:50																									
SW7-07	No access, unable to make contact with landowner.	4/04/2019	12:39																									
SW7-07	No visible flow, low water level. Weather fine.	17/05/2019	12:19	4.67	0.39	7.22	18.5	0	1	1	0.05	2.04	30	100	50													
SW7-07	Upstream and downstream sites not connected. No visible flow, low water level. Weather fine.	25/06/2019	12:55	2.06	0.39	7.23	13.5	0																				
SW7-07	Upstream and downstream sites not connected. No visible flow, medium water level. Weather fine.	2/08/2019	10:12	0.00	0.38	6.29	13.5	0	2	1	0.05	0.70	30	100	50													
SW7-07	Insufficient water to monitor.	11/12/2019	15:31																									
SW7-07	Upstream and downstream sites not connected. No visible flow, medium water level. Rain.	18/01/2020	10:08	4.69	0.64	7.03	22.9	35	2	16	0.13	2.46	50	100	50													
SW7-07	No access - unable to make contact with landowner.	5/02/2020	14:38																									

SW7-08 - South of the intersection with the existing Pacific Highway and Norton's Road

Wet Event Monitoring

[illegible]

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

[illegible]

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

[illegible]

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW8-01	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Weather fine.	4/06/2019	9:13	6.21	47.90	7.40	15.5	13																				
SW8-02	Upstream and downstream sites connected. Very low flow, very low water level. Outgoing tide. Sampled on northern bank due to access constraints. Weather fine.	9/07/2019	10:34	7.80	16.60	6.59	16.8	24	1	15	0.06	1.21	30	100	50													
SW8-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Sampled at northern bank. Weather fine.	15/08/2019	12:49	7.00	37.00	7.41	19.1	9																				
SW8-01	Upstream and downstream sites connected. Very low flow, high water level. Incoming tide. Weather fine.	6/09/2019	12:43	6.40	42.40	7.47	23.9	27	1	32	0.04	0.39	30	200	50													
SW8-01	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Sampled at northern bank due to access constraints. Weather fine.	2/10/2019	8:29	7.41	47.00	7.52	21.9	24																				
SW8-01	Upstream and downstream sites connected. Low flow, very low water level. Incoming tide. Weather fine. Sampled at northern bank.	6/11/2019	8:03	3.79	53.20	7.53	23.1	39	10	36	0.12	0.50	30	100	50													
SW8-01	Upstream and downstream sites connected. Medium flow, low water level. Incoming tide. Weather fine.	5/12/2019	13:19	5.88	54.10	7.63	28.8	34																				
SW8-02	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	9/01/2020	11:46	5.35	55.60	7.74	30.4	37	5	20	0.15	0.67	30	100	50													
SW8-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	17/02/2020	12:07	1.09	0.26	6.26	28.0	65																				
SW8-02	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Overcast.	5/03/2020	10:52	3.47	6.04	6.80	27.7	30	17	1	0.28	1.87	30	100	50													
SW8-01	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Overcast.	1/04/2020	15:07	6.73	7.99	7.18	27.1	72																				
SW8-01	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Overcast.	14/05/2020	12:19	6.65	35.10	7.36	20.8	40	3	17	0.10	0.52	30	100	50													
SW8-01	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	10/06/2020	10:55	6.25	34.30	6.96	18.5	17																				
SW8-01	Upstream and downstream sites connected. Low flow, very high water level. Incoming tide. Overcast.	17/11/2020	11:37	4.82	48.50	7.44	29.0	42	2	25	0.03	0.72	30	100	50	0.132	0.001	0.0005	0.001	0.001	0.422	0.001	0.308	0.0003	0.003	0.001	0.0050	0.002
SW8-01	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	4/05/2021	13:14	7.28	11.00	6.71	23.8	39	1	22	0.07	0.74	30	100	50	0.333	0.001	0.0005	0.001	0.001	1.304	0.001	0.522	0.0003	0.006	0.001	0.0005	0.013

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

[illegible]

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					44.06	7.51		77	3	44	0.16	0.86	30	184	50	0.365	0.001	0.0005	0.001	0.003	1.342	0.003	0.583	0.0003	0.005	0.002	0.0022	0.008	
P20				5.62	17.44	6.80																							
St Dev					14.79	0.45																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW05		3/04/2013		6.52	17.30	6.80	27.0	35	3	32	0.15	0.90	50	50	50	0.020	0.001	0.0001	0.001	0.001	0.090	0.001	0.895	0.0001	0.006	0.005	0.0005	0.007	
SW05		29/04/2013		6.80	5.44	7.40	23.3	24	3	19	0.14	1.10	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.002	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A	
SW05		27/08/2013		8.40	24.80	6.60	19.1	17	3	22	1.07	0.80	N/A	N/A	N/A	N/A	N/A	0.0003	N/A	0.003	N/A	0.003	N/A	N/A	N/A	N/A	N/A	N/A	
SW05		23/09/2013		10.80	24.70	7.50	25.9	17	3	32	0.01	0.05	N/A	N/A	N/A	N/A	N/A	0.0003	N/A	0.003	N/A	0.003	N/A	N/A	N/A	N/A	N/A	N/A	
SW05		28/10/2013		8.70	33.90	7.20	22.4	13	3	40	0.21	0.60	N/A	N/A	N/A	N/A	N/A	0.0003	N/A	0.003	N/A	0.003	N/A	N/A	N/A	N/A	N/A	N/A	
SW05		16/12/2013		7.60	36.80	6.10	27.1	10	3	57	0.15	1.60	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.004	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A	
Upstream Monitoring																													
SW8-01	Photo taken	10/08/2016		6.84	15.90	6.79	20.9	69																					
SW8-01		9/09/2016		8.00	7.88	6.85	21.9	758	3	44	0.09	0.55	25	50	50														
SW8-01		10/10/2016		7.09	32.00	7.01	25.9	54																					
SW8-01		2/11/2016		5.03	42.10	7.07	25.2	59	6	19	0.13	0.66	25	50	50														
SW8-01	High tide	14/12/2016		6.02	45.10	7.33	28.5	35																					
SW8-01	High tide, low flow.	17/01/2017		6.93	43.90	7.65	31.9	120	8	34	0.22	0.59	25	50	50														
SW8-01	High tide, flowing out.	1/02/2017		6.18	44.20	7.65	31.3	144																					
SW8-02	Mid tide, flowing in therefore SW8-02 is upstream.	3/03/2017		9.76	34.50	7.67	29.3	33	2	58	0.13	0.67	25	50	50														
SW8-02	Low, incoming tide therefore SW8-02 is upstream. Low flow. U/s and d/s sites connected. Overcast. Unable to obtain accurate turbidity reading.	21/04/2017		6.26	1.76	6.67	24.5																						
SW8-01	Upstream and downstream sites connected. Outflowing tide, medium water level. Weather fine.	23/05/2017		7.72	21.40	6.38	22.0	69	4	61	0.14	0.64	25	50	50														
SW8-01	Upstream and downstream sites connected. Outflowing tide. Can't determine flow strength due to high winds. Water level moderate to high. Weather fine.	9/06/2017		8.83	30.00	6.63	19.1	88																					
SW8-01	Upstream and downstream sites connected. Outgoing tide, high water level. Weather fine.	12/07/2017		9.74	11.70	6.46	17.7	107	3	49	0.04	0.01	25	50	50														

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

[illegible]

Dry Event Monitoring

Dry Event Monitoring

SW8-02 - Tuckombil Canal (becomes Evans River)

Dry Event Monitoring

[illegible]

SW8-02 - Tuckombil Canal (becomes Evans River)

Wet Event Monitoring

[illegible]

SW8-02 - Tuckombil Canal (becomes Evans River)

Wet Event Monitoring

[illegible]

SW8-02 - Tuckombil Canal (becomes Evans River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW8-02	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	17/08/2020	13:00	8.85	11.00	6.56	20.4	68																				
SW8-02	Upstream and downstream sites connected. High flow, very high water level. Outgoing tide. Rain.	16/12/2020	13:08	4.29	0.11	6.62	22.3	428	4	266	0.55	1.27	30	100	50	2.901	0.001	0.0005	0.002	0.004	2.572	0.001	0.073	0.0003	0.004	0.001	0.0050	0.008
SW8-02	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	15/02/2021	15:58	7.62	33.30	6.78	26.8	37																				
SW8-01	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	6/05/2021	15:01	8.71	9.88	6.88	21.7	34	1	30	0.12	0.75	30	100	50	0.454	0.001	0.0005	0.001	0.001	1.134	0.001	0.551	0.0003	0.006	0.001	0.0005	0.011
SW8-02	Upstream and downstream connected. High flow. Medium water level. Outgoing tide. Overcast.	11/11/2021	12:12	7.89	35.40	7.28	27.1	58	1	47	0.09	0.46	30	100	50	0.156	0.002	0.0015	0.002	0.002	0.534	0.002	0.260	0.0050	0.003	0.001	0.0050	0.016
SW8-01	Upstream and downstream sites connected. Medium flow, very high water level. Incoming tide. Overcast.	17/05/2022	10:24	6.60	0.15	5.86	20.9	65	5	48	0.22	1.04	30	100	50	0.646	0.001	0.0005	0.001	0.002	1.830	0.001	0.080	0.0003	0.003	0.001	0.0005	0.008
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					43.90	7.39		82	3	50	0.23	1.20	30	100	50	1.076	0.001	0.0015	0.002	0.004	1.888	0.002	0.314	0.0012	0.005	0.002	0.0050	0.018
P20				5.20	13.40	6.59																						
St Dev					16.69	0.50																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW05		31/01/2013		N/A	0.12	N/A	N/A	N/A	3	27	0.02	0.70	50	50	50	0.370	0.001	0.0001	0.001	0.002	0.470	0.001	0.024	0.0001	0.002	0.005	0.0005	0.003
SW05		28/02/2013		2.02	0.08	5.45	24.8	N/A	3	30	0.21	1.20	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW05		27/05/2013		9.30	18.10	6.70	18.1	22	3	38	0.03	0.30	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW05		4/07/2013		8.10	0.22	6.80	n/a	232	3	149	0.51	1.40	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.003	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW05		29/07/2013		8.70	13.40	6.60	23.4	17	3	14	0.21	0.60	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW05		19/11/2013		7.40	43.20	6.60	24.7	19	3	30	0.03	0.70	N/A	N/A	N/A	N/A	N/A	0.0025	N/A	0.025	N/A	0.005	N/A	N/A	N/A	N/A	N/A	N/A
SW05		25/11/2013		7.60	39.20	7.40	26.0	41	3	24	0.19	0.05	N/A	N/A	N/A	N/A	N/A	0.0025	N/A	0.025	N/A	0.005	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																												
SW8-01	Photo taken	4/08/2016		7.61	27.30	6.91	17.3	51																				
SW8-01	Low tide.	7/12/2016		4.14	43.90	7.12	27.0	534	1	48	0.23	0.85	25	50	50													
SW8-01		3/01/2017		4.45	47.30	7.39	28.1	135																				

SW8-02 - Tuckombil Canal (becomes Evans River)

Wet Event Monitoring

[illegible]

SW8-02 - Tuckombil Canal (becomes Evans River)

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW8-02	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Sampled at northern bank due to access constraints. Drizzle.	12/10/2018	8:16	6.28	16.00	6.45	16.7	110																				
SW8-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Sampled from northern bank. Weather fine.	20/11/2018	9:12	6.06	24.20	7.28	25.3	40	4	17	0.08	0.66	30	100	50													
SW8-02	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	24/12/2018	10:34	4.87	41.80	6.99	25.9	74																				
SW8-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	25/02/2019	14:13	6.94	52.90	7.54	25.2	51	3	53	0.15	0.66	30	100	50													
SW8-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	8/03/2019	14:43	6.64	51.90	7.59	27.1	37																				
SW8-01	Upstream and downstream sites connected. Very low flow, medium water level. Outgoing tide. Weather fine.	4/04/2019	13:54	8.94	34.00	7.56	24.6	22	1	17	0.01	0.99	30	100	50													
SW8-01	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Rain.	25/06/2019	11:14	9.70	15.80	6.53	13.5	48																				
SW8-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Drizzle.	5/07/2019	11:13	7.61	19.10	6.51	18.0	37	5	23	0.06	1.46	30	100	50													
SW8-02	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Weather fine.	2/12/2019	14:55	5.92	53.60	7.63	27.6	31																				
SW8-02	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Drizzle.	18/01/2020	10:58	5.20	49.80	7.63	26.5	54	6	50	0.11	0.55	50	100	50													
SW8-02	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Drizzle.	4/02/2020	14:11	3.37	44.80	7.41	28.2	75																				
SW8-02	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Overcast.	7/03/2020	12:45	4.09	7.63	6.65	28.1	62	12	26	0.26	1.72	30	100	50													
SW8-01	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Weather fine.	11/04/2020	14:31	6.08	25.40	7.09	25.7	34																				
SW8-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	18/05/2020	11:21	7.15	32.60	7.28	20.7	29	7	17	0.05	0.38	30	100	50													
SW8-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Weather fine.	11/06/2020	11:31	7.02	34.00	7.04	19.5	13																				
SW8-01	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	17/08/2020	13:05	9.34	10.80	6.90	20.7	96																				
SW8-01	Upstream and downstream sites connected. High flow, very high water level. Outgoing tide. Rain.	16/12/2020	13:02	4.38	0.11	6.66	22.3	437	3	262	0.48	1.21	30	100	50	2.873	0.001	0.0005	0.002	0.004	2.560	0.001	0.094	0.0003	0.004	0.001	0.0050	0.008

SW8-02 - Tuckombil Canal (becomes Evans River)

Wet Event Monitoring

[illegible]

SW8-04 - Unnamed watercourse at CH 134800

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW8-04	Photo taken	10/08/2016		9.59	0.28	5.16	24.8	27																					
SW8-04		9/09/2016		8.45	0.32	4.51	21.6	114	12	534	0.63	3.67	25	50	50														
SW8-04	Dry	10/10/2016																											
SW8-04	Dry	2/11/2016																											
SW8-04	Dry	14/12/2016																											
SW8-04	Dry	17/01/2017																											
SW8-04	Dry	1/02/2017																											
SW8-04	Dry	13/03/2017																											
SW8-04	Dry	21/04/2017																											
SW8-04	Upstream and downstream sites connected. No visible flow. Low water level. Could not obtain accurate DO reading due to low water level. Weather fine.	23/05/2017			0.22	5.91	21.8	21	5	53	0.20	1.64	25	50	50														
SW8-04	Dry	9/06/2017																											
SW8-04	Insufficient water to sample	13/07/2017																											
SW8-04	Insufficient water to monitor.	4/08/2017																											
SW8-04	Fine weather. U/S and D/S not connected. No observed flow. Dry.	1/09/2017																											
SW8-04	Insufficient water to sample. Not connected to upstream site.	25/10/2017																											
SW8-04	Insufficient water to sample. Not connected to upstream site.	22/11/2017																											
SW8-04	Insufficient water to sample. Not connected to upstream site. Weather fine.	15/12/2017																											
SW8-04	Dry - unable to sample. Weather fine.	23/01/2018																											
SW8-04	Dry - unable to sample. Weather fine.	16/02/2018																											
SW8-04	Insufficient water to sample. Weather fine.	20/03/2018																											
SW8-04	No access, exclusion zone blocking access track.	5/04/2018																											
SW8-04	No access, exclusion zone blocking access track.	4/05/2018																											
SW8-04	Upstream and downstream sites not connected. No visible flow, low water level. Sampled amongst heavy vegetation. Weather fine.	15/06/2018	11:28	0.71	0.38	5.66	12.5	4																					
SW8-04	Upstream and downstream sites not connected. No visible flow. Sampled in bucket due to very low water level- could not obtain oxygen measurement. Weather fine.	18/07/2018	13:16		0.70	7.05	12.9	29	1	41	0.16	0.61	30	250	250														
SW8-04	Dry, not sampled.	9/08/2018	10:44																										

SW8-04 - Unnamed watercourse at CH 134800

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW8-04	Dry - not sampled.	21/09/2018	13:42																									
SW8-04	Insufficient water to sample.	3/10/2018	11:11																									
SW8-04	Insufficient water to sample.	8/11/2018	9:30																									
SW8-04	No visible flow, very low water level. Slight surface bacteria layer, heavy aquatic vegetation. Red brown algae present. Overcast.	7/12/2018	14:24	2.40	0.69	6.55	23.9	14																				
SW8-04	Dry, not sampled.	11/01/2019	13:30																									
SW8-04	Dry, not sampled.	13/02/2019	10:47																									
SW8-04	Dry, not sampled.	15/03/2019	11:12																									
SW8-04	Dry, not sampled.	11/04/2019	8:39																									
SW8-04	Dry, not sampled.	8/05/2019																										
SW8-04	Insufficient water to sample.	3/06/2019	15:15																									
SW8-04	Upstream and downstream sites not connected. Very low flow, medium water level, algae. Weather fine.	9/07/2019	11:57	9.19	0.19	6.13	17.4	8	1	6	0.11	1.32	30	100	50													
SW8-04	Insufficient water to sample.	15/08/2019	11:49																									
SW8-04	Insufficient water to monitor.	6/09/2019	13:29																									
SW8-04	Dry, not sampled.	2/10/2019	9:15																									
SW8-04	Dry, not sampled.	6/11/2019	8:43																									
SW8-04	Dry, not sampled.	5/12/2019	12:42																									
SW8-04	Insufficient water to sample.	9/01/2020	11:16																									
SW8-04	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	17/02/2020	12:54	0.02	0.24	5.52	27.2	33																				
SW8-04	Upstream and downstream sites not connected. No visible flow, very low water level. Overcast.	5/03/2020	11:49	0.33	0.40	5.00	26.4	13	4	1	0.07	0.87	30	100	50													
SW8-04	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	1/04/2020	14:08	3.14	0.41	5.07	25.0	12																				
SW8-04	No visible flow, very low water level. Overcast.	14/05/2020	13:24	1.64	0.57	4.45	17.3	13	2	9	0.03	0.45	30	100	50													
SW8-04	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	10/06/2020	10:18	3.83	0.41	4.76	16.3	2																				
SW8-04	Dry, not sampled.	17/11/2020																										
SW8-04	Upstream and downstream sites connected. High flow, high water level. Weather fine.	4/05/2021	14:23	4.18	0.14	4.71	20.6	0	1	1	0.03	0.62	30	100	50	0.828	0.001	0.0005	0.001	0.001	1.455	0.001	0.018	0.0003	0.001	0.001	0.0005	0.007
SW8-04	insufficient water to sample	23/11/2021																										
SW8-04	Upstream and downstream sites not connected. No visible flow, medium water level. Overcast.	20/05/2022	12:22	0.66	0.12	4.60	18.9	6	2	1	0.03	0.82	30	100	50	0.692	0.001	0.0005	0.001	0.001	1.660	0.001	0.038	0.0003	0.001	0.001	0.0005	0.024

SW8-04 - Unnamed watercourse at CH 134800

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.48	4.49		23	4	37	0.08	1.07	30	100	50	0.794	0.001	0.0005	0.001	0.001	1.995	0.001	0.032	0.0003	0.001	0.003	0.0005	0.005	
P20				0.86	0.21	4.20																							
St Dev					0.19	1.21																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW06		3/04/2013		7.30	0.21	4.50	26.4	9	3	3	0.04	0.60	50	50	50	0.420	0.001	0.0001	0.001	0.001	1.030	0.001	0.024	0.0001	0.001	0.005	0.0005	0.003	
SW06		28/04/2013		9.05	0.19	9.30	24.7	2	3	3	0.06	0.90	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A	
SW06		27/08/2013		8.40	0.49	4.00	18.3	8	3	48	0.15	1.70	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A	
SW06		23/09/2013		8.40	0.58	4.30	25.4	12	3	37	0.08	1.00	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A	
SW06	Dry	28/10/2013																											
SW06	Dry	16/12/2013																											
Upstream Monitoring																													
SW8-03	Photo taken	10/08/2016		3.97	0.27	4.84	15.4	2																					
SW8-03		9/09/2016		1.98	0.47	4.16	16.8	98	4	12	0.03	0.47	25	50	50														
SW8-03	Dry	10/10/2016																											
SW8-03	Water depth insufficient for sample	2/11/2016																											
SW8-03	Dry	14/12/2016																											
SW8-03	Dry	17/01/2017																											
SW8-03	Dry	1/02/2017																											
SW8-03	Dry	13/03/2017																											
SW8-03	High water level. No visible flow. Overcast.	21/04/2017		1.83	0.27	4.30	19.1	24																					
SW8-03	Upstream and downstream sites connected. No visible flow. High water level. Weather fine.	23/05/2017		3.56	0.21	4.35	17.6	18	4	43	0.07	0.92	25	50	50														
SW8-03	Insufficient water to monitor.	9/06/2017																											
SW8-03	Upstream and downstream sites connected. No visible flow. Low water level. Overcast.	13/07/2017		3.12	0.28	4.24	12.5	16	1	3	0.02	0.32	25	50	50														
SW8-03	Insufficient water to monitor.	4/08/2017																											
SW8-03	Fine weather. Dry.	1/09/2017																											

SW8-04 - Unnamed watercourse at CH 134800

Dry Event Monitoring

[illegible]

SW8-04 - Unnamed watercourse at CH 134800

Dry Event Monitoring

[illegible]

SW8-04 - Unnamed watercourse at CH 134800

Wet Event Monitoring

[illegible]

SW8-04 - Unnamed watercourse at CH 134800

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW8-04	Dry, not sampled.	8/03/2019	15:12																									
SW8-04	Dry, not sampled.	3/04/2019	13:57																									
SW8-04	Low flow, low water level. Overcast.	25/06/2019	9:22	5.11	0.17	5.72	13.3	23																				
SW8-04	Upstream and downstream sites connected. Very low flow, medium water level. Rain.	5/07/2019	9:26	0.91	0.16	5.70	16.2	26	4	16	0.32	1.98	30	100	50													
SW8-04	Dry, not sampled.	2/12/2019	14:29																									
SW8-04	Dry, not sampled.	18/01/2020	12:06																									
SW8-04	Dry, not sampled.	4/02/2020	13:37																									
SW8-04	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	7/03/2020	13:26	2.62	0.43	5.31	26.2	12	12	4	0.04	0.43	30	240	50													
SW8-04	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	11/04/2020	15:03	5.57	0.24	5.23	25.2	21																				
SW8-04	Upstream and downstream sites not connected. Low flow, medium water level. Weather fine.	18/05/2020	12:12	4.69	0.48	4.83	19.1	4	3	20	0.03	0.41	30	100	50													
SW8-04	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	11/06/2020	12:05	5.16	0.40	5.49	18.0	16																				
SW8-04	Upstream and downstream sites not connected. Very low flow, low water level. Weather fine.	17/08/2020	13:32	5.11	0.31	4.63	17.1	6																				
SW8-04	Upstream and downstream sites connected. Medium flow, very high water level. Rain.	15/12/2020	11:16	4.14	0.15	4.99	23.8	12	6	1	0.09	0.70	30	100	50	0.318	0.001	0.0005	0.001	0.001	0.207	0.001	0.090	0.0003	0.001	0.001	0.0050	0.008
SW8-04	No visible flow, very low water level. Weather fine.	15/02/2021	15:32	1.42	0.41	4.79	23.5	36																				
SW8-04	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	6/05/2021	15:28	4.00	0.15	5.17	17.8	8	1	7	0.04	0.84	30	100	50	0.770	0.001	0.0005	0.001	0.001	1.374	0.001	0.025	0.0003	0.001	0.001	0.0005	0.005
SW8-04	Insufficient water to monitor.	11/11/2021	12:57																									
SW8-04	Upstream and downstream sites not connected. Very low flow, high water level. Overcast.	17/05/2022	10:58	1.33	0.11	4.87	21.6	27	2	8	0.04	0.98	30	100	50	0.795	0.001	0.0005	0.001	0.001	2.169	0.001	0.039	0.0003	0.001	0.001	0.0005	0.041
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.51	5.13		12	3	16	0.08	1.14	30	100	50	0.970	0.001	0.0005	0.001	0.002	2.363	0.001	0.114	0.0012	0.002	0.002	0.0050	0.016
P20				2.29	0.13	4.19																						
St Dev					0.22	0.75																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW06		1/02/2013		N/A	0.18	N/A	N/A	N/A	3	3	0.30	1.50	50	50	50	0.860	0.001	0.0001	0.001	0.002	2.270	0.001	0.110	0.0001	0.002	0.005	0.0005	0.013
SW06		28/02/2013		3.44	0.13	4.14	27.9	N/A	3	21	0.07	1.00	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A

SW8-04 - Unnamed watercourse at CH 134800

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW06		27/05/2013		9.20	0.14	4.20	19.6	2	3	3	0.03	0.50	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW06		5/07/2013		6.30	0.12	4.20	16.6	1	3	3	0.01	0.60	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW06		29/07/2013		9.60	0.20	4.10	22.3	12	3	14	0.07	0.60	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW06		19/11/2013		10.00	0.51	6.00	27.8	122	3	168	0.61	5.10	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW06		25/11/2013		9.30	0.22	7.10	29.0	23	3	17	0.16	1.80	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.002	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																												
SW8-03	Photo taken	4/08/2016		4.82	0.42	4.81	14.5	9																				
SW8-03	Dry	6/12/2016																										
SW8-03	Dry	3/01/2016																										
SW8-03	Dry	27/02/2017																										
SW8-03	Steady flow, heavy rainfall.	15/03/2017		5.37	0.68	5.47	22.9	20																				
SW8-03	Very high water level. U/s and d/s sites connected. Showers and overcast weather.	5/04/2017		2.26	0.11	5.12	19.0	22	2	3	0.05	1.19	25	50	50													
SW8-03	No visible flow, no connection between u/s and d/s sites.	4/05/2017		2.41	0.47	4.18	18.0	5																				
SW8-03	Upstream and downstream sites connected. No visible flow. Very high water level. Sample point approx. 30 m SW of designated sample point due to high water level. Drizzle.	14/06/2017		3.23	0.12	5.13	16.5	0	1	9	0.05	1.07	25	50	50													
SW8-03	Dry	4/10/2017																										
SW8-03	Insufficient water to sample	6/11/2017																										
SW8-03	Dry	2/12/2017																										
SW8-03	Upstream and downstream sites not connected. No visible flow, very low water level. Insufficient water to sample. Weather fine.	4/01/2018																										
SW8-03	Dry, not sampled.	2/02/2018																										
SW8-03	Upstream and downstream sites connected. No visible flow, very high water level. Overcast.	7/03/2018		3.39	0.24	4.21	21.6	0	1	6	0.03	0.82	25	50	50													
SW8-03	Upstream and downstream sites not connected. No visible flow, dry. Weather fine.	19/04/2018																										
SW8-03	No wet weather access to site	1/05/2018																										
SW8-03	No wet weather access to site	8/06/2018																										
SW8-03	Upstream and downstream sites not connected. No visible flow, low water level. Sampled in shallow pool. Overcast.	4/07/2018	11:44	2.05	0.52	4.07	15.8	6	1	58	0.09	0.81	30	250	250													
SW8-03	Dry, not sampled.	28/08/2018	9:41																									

SW8-04 - Unnamed watercourse at CH 134800

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW8-03	Insufficient water to montior.	4/09/2018	11:54																									
SW8-03	Dry, not sampled.	11/10/2018	13:24																									
SW8-03	Dry, not sampled.	20/11/2018	9:35																									
SW8-03	Dry, not sampled.	24/12/2018	9:35																									
SW8-03	Dry, not sampled.	25/02/2019	15:01																									
SW8-03	Dry, not sampled.	8/03/2019	15:10																									
SW8-03	Dry, not sampled.	3/04/2019	13:57																									
SW8-03	Insufficient water to monitor.	25/06/2019	9:45																									
SW8-03	Upstream and downstream sites connected. No visible flow, low water level. Rain.	5/07/2019	10:15	0.36	0.84	4.27	16.5	10	7	6	0.04	0.79	30	100	50													
SW8-03	Dry, not sampled.	2/12/2019	14:30																									
SW8-03	Dry, not sampled.	18/01/2020	12:05																									
SW8-03	Dry, not sampled.	4/02/2020	13:37																									
SW8-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	7/03/2020	13:13	1.11	0.27	4.44	23.6	0	9	1	0.02	0.52	30	100	50													
SW8-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	11/04/2020	14:53	2.98	0.16	4.73	20.9	0																				
SW8-03	Upstream and downstream sites not connected. Very low flow, low water level. Weather fine.	18/05/2020	11:58	2.56	0.43	4.32	17.7	1	3	1	0.02	0.48	30	100	50													
SW8-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	11/06/2020	11:56	3.67	0.23	4.78	16.8	2																				
SW8-03	Upstream and downstream sites not connected. No visible flow, very low water level. Insufficient water to sample DO and turbidity. Weather fine.	17/08/2020	13:22		0.54	4.76	16.1																					
SW8-03	Upstream and downstream sites connected. Very low flow, very high water level. Rain.	15/12/2020	11:04	3.30	0.72	3.89	22.2	3	2	5	0.05	0.51	30	100	50	1.411	0.001	0.0005	0.001	0.001	0.432	0.001	0.130	0.0003	0.003	0.001	0.0050	0.014
SW8-03	Insufficient water to monitor.	15/02/2021	15:29																									
SW8-03	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	6/05/2021	15:23	3.82	0.14	4.79	16.7	10	1	4	0.03	0.83	30	100	50	0.691	0.001	0.0005	0.001	0.001	1.326	0.001	0.020	0.0003	0.001	0.001	0.0005	0.012
SW8-03	No visable flow. Low water level. Overcast.	11/11/2021	12:49	10.75	0.37	5.59	22.9	7	1	3	0.04	0.51	30	100	50	0.208	0.002	0.0015	0.002	0.002	2.734	0.002	0.093	0.0050	0.001	0.002	0.0050	0.022
SW8-03	Upstream and downstream sites not connected. No visable flow, medium water level. Overcast.	17/05/2022	11:11	0.98	0.10	4.39	20.8	8	2	3	0.04	1.03	30	100	50	0.852	0.001	0.0005	0.001	0.001	2.230	0.001	0.036	0.0003	0.001	0.001	0.0005	0.006

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Dry Event Monitoring

[illegible]

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Dry Event Monitoring

[illegible]

Dry Event Monitoring

Upstream Monitoring

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW8-05	Water depth insufficient for sample.	2/11/2016																										
SW8-05	Very low water level.	14/12/2016		6.93	0.37	4.53	35.5	59																				
SW8-05	Dry	17/01/2017																										
SW8-05	Insufficient water for sampling and monitoring	3/02/2017																										
SW8-05	Insufficient water for sampling and monitoring	13/03/2017																										
SW8-05	Low flow, mid water level. U/s and d/s sites connected. Overcast.	21/04/2017		5.86	0.15	4.39	23.8	31																				
SW8-05	Upstream and downstream sites connected. Steady flow, high water level. Weather fine.	23/05/2017		7.74	0.16	4.40	20.4	4	4	31	0.09	1.06	25	50	50													
SW8-05	Upstream and downstream sites connected. Low to moderate water level and flow. Weather fine.	9/06/2017			0.17	4.51	18.2	11																				
SW8-05	Upstream and downstream sites connected. Steady flow. Medium water level. Overcast.	13/07/2017		7.08	0.14	4.34	14.2	21	1	11	0.02	0.41	25	50	50													
SW8-05	Upstream and downstream sites connected. Low flow, very low water level. Weather fine.	4/08/2017		5.59	0.16	4.60	17.4																					
SW8-05	Fine weather. U/S and D/S connected. No observed flow. Insufficient water for sample.	7/09/2017																										
SW8-05	Insufficient water to sample.	25/10/2017																										
SW8-05	Upstream and downstream sites connected. Slight flow, low water level. Weather fine.	22/11/2017		7.78	0.20	4.54	21.8	10	1	1	0.02	0.22	25	50	50													
SW8-05	Insufficient water to sample, heavy aquatic vegetation and algal growth. Weather fine.	15/12/2017																										
SW8-05	Upstream and downstream sites connected. No visible flow. Insufficient water to sample. Weather fine.	23/01/2018																										
SW8-05	Upstream and downstream sites connected. No visible flow, very low water level. Unable to take DO reading due to very low water level. Weather fine.	16/02/2018			0.22	4.87	26.4	14																				
SW8-05	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	20/03/2018		3.81	0.20	4.40	22.8	8	2	30	0.05	0.54	25	50	50													
SW8-05	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	5/04/2018		9.02	0.21	4.80	25.8	7																				
SW8-05	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	4/05/2018		6.98	0.15	4.52	19.9	9	1	3	0.02	0.40	30	250	250													
SW8-05	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	15/06/2018	11:42	8.71	0.19	4.31	15.0	6																				
SW8-05	Upstream and downstream sites connected. Very low flow. Abundant aquatic veg. Sample water collected in bucket due to very low water level- could not obtain oxygen measurement. Weather fine.	18/07/2018	13:36		0.24	5.26	16.3	3	4	3	0.02	0.17	30	250	250													

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW8-05	Upstream and downstream sites connected. Very low flow. Could not obtain turbidity reading due to very low water level and heavy aquatic vegetation. Weather fine.	9/08/2018	9:32	4.72	0.15	5.02	11.8	196																				
SW8-05	Heavy aquatic vegetation, very low water level - insufficient water to sample. Weather fine.	21/09/2018	14:30																									
SW8-05	Insufficient water to sample, heavy aquatic vegetation growth.	3/10/2018	10:12																									
SW8-05	Upstream and downstream sites connected. No visible flow. Heavy aquatic vegetation, water dark brown. Sampled in bucket due to very low water level- no oxygen reading. Overcast.	8/11/2018	8:16		0.30	5.72	22.7	38	12	158	0.42	2.25	30	300	50													
SW8-05	Insufficient water to sample.	7/12/2018	14:23																									
SW8-05	Dry.	10/01/2019	13:35																									
SW8-05	Dry, not sampled.	13/02/2019	10:56																									
SW8-05	Dry, not sampled.	15/03/2019	11:11																									
SW8-05	Upstream and downstream sites connected. No visible flow, very low water level. Heavy aquatic vegetation. Overcast.	11/04/2019	11:05	7.06	0.39	5.36	23.9	82																				
SW8-05	Dry, not sampled.	8/05/2019																										
SW8-05	Insufficient water to sample.	3/06/2019	14:50																									
SW8-05	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	9/07/2019	12:42	4.50	0.27	4.90	17.3	7	2	3	0.01	0.23	30	100	50													
SW8-05	Upstream and downstream sites connected. No visible flow, very low water level. Brown algae. Weather fine.	15/08/2019	11:33	6.25	0.25	4.78	16.9	6																				
SW8-05	Insufficient water to monitor.	6/09/2019	13:50																									
SW8-05	Dry, not sampled.	2/10/2019	9:24																									
SW8-05	Dry, not sampled.	6/11/2019	8:50																									
SW8-05	Insufficient water to sample.	5/12/2019	12:40																									
SW8-05	Insufficient water to sample.	9/01/2020	11:06																									
SW8-05	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	17/02/2020	13:24	0.00	0.19	4.60	26.4	12																				
SW8-05	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	5/03/2020	12:02	0.40	0.20	4.51	25.4	6	8	1	0.03	0.37	30	100	50													
SW8-05	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	1/04/2020	13:31	3.41	0.19	4.44	23.9	5																				
SW8-05	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	14/05/2020	13:47	6.09	0.23	4.37	18.6	12	1	19	0.03	0.44	30	100	50													
SW8-05	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	10/06/2020	10:03	4.41	0.24	4.38	16.6	6																				

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Dry Event Monitoring

[illegible]

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW8-06		4/08/2016		7.32	0.19	5.81	16.4	6																					
SW8-06	Not possible to obtain accurate turbidity reading due to shallow water.	6/12/2016		4.30	0.34	6.38	28.8		1	29	0.07	9.34	25	50	50														
SW8-06	Water too shallow for DO reading. Readings for other parameters taken in jar.	3/01/2017			0.34	6.41	26.4	23																					
SW8-06	Insufficient water for sampling and monitoring	27/02/2017																											
SW8-06	Heavy rain. Strong flow. Upstream and downstream sites connected.	15/03/2017		6.24	0.10	6.57	23.9	53																					
SW8-06	No access - water over access road	5/04/2017																											
SW8-06	Moderate flow, u/s and d/s sites connected. Overcast.	4/05/2017		6.08	0.18	5.18	20.4	16																					
SW8-06	Not safe to access. Haul road closed due to flooding.	13/06/2017																											
SW8-06	Insufficient water to sample.	4/10/2017																											
SW8-06	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	6/11/2017		5.94	0.19	5.28	24.5	19	1	9	0.04	0.47	25	50	50														
SW8-06	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	2/12/2017		4.15	0.18	5.28	23.1	0																					
SW8-06	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	4/01/2018		4.73	0.19	5.36	23.4	0	1	2	0.02	0.18	25	50	50														
SW8-06	Upstream and downstream sites connected. No visible flow, low water level. Water milky blue colour. Rain.	2/02/2018		3.74	0.22	6.36	21.4	32																					
SW8-06	Upstream and downstream sites connected. High flow, very high water level. Rain.	7/03/2018		4.96	0.14	5.46	25.6	67	2	13	0.07	0.65	25	50	50														
SW8-06	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	19/04/2018		2.02	0.15	5.98	21.7	37																					
SW8-06	No wet weather access to site	1/05/2018																											
SW8-06	No wet weather access to site	8/06/2018																											
SW8-06	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	4/07/2018	11:21	6.29	0.20	5.03	17.3	9	1	10	0.03	0.20	30	250	250														
SW8-06	Upstream and downstream sites connected. Low flow, very low water level. Weather fine.	28/08/2018	9:39	6.48	0.25	6.86	14.4	11																					
SW8-06	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	4/09/2018	11:29	5.40	0.32	4.94	15.3	50	4	22	0.06	0.48	30	250	250														
SW8-06	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	11/10/2018	13:48	4.53	0.19	5.49	19.2	44																					
SW8-06	Upstream and downstream sites connected. Low flow, low water level. Brown algae present, abundant aquatic vegetation. Weather fine.	20/11/2018	10:22	2.47	0.15	5.43	20.3	0	1	10	0.01	0.17	30	100	50														

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW8-06	Insufficient water to sample, red algae present, heavy aquatic vegetation.	24/12/2018	9:53																										
SW8-06	Insufficient water to sample.	25/02/2019	15:13																										
SW8-06	Insufficient water to sample.	8/03/2019	15:18																										
SW8-06	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	3/04/2019	13:17	4.21	0.26	6.13	21.6	19	1	5	0.02	1.06	30	100	50														
SW8-06	Upstream and downstream sites connected. High flow, medium water level. Overcast.	25/06/2019	10:01	8.00	0.15	5.89	14.0	61																					
SW8-06	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	5/07/2019	9:57	4.23	0.23	5.55	16.9	15	3	2	0.01	0.32	30	100	50														
SW8-06	Dry, not sampled.	2/12/2019	14:00																										
SW8-06	Upstream and downstream sites connected. Low flow, medium water level. Rain.	18/01/2020	12:20	5.88	0.26	6.58	22.9	356	6	190	0.16	2.09	530	440	120														
SW8-06	No visible flow, very low water level. Overcast.	4/02/2020	13:16	5.58	0.35	6.45	24.0	84																					
SW8-06	Upstream and downstream sites connected. High flow, high water level. Drizzle.	7/03/2020	13:40	2.92	0.18	4.88	25.6	3	11	2	0.03	0.44	30	100	50														
SW8-06	Upstream and downstream sites connected. Very high flow, high water level. Weather fine.	11/04/2020	15:10	4.67	0.16	4.96	25.5	6																					
SW8-06	Upstream and downstream sites connected. High flow, medium water level. Overcast.	18/05/2020	12:26	5.39	0.18	4.88	19.9	12	3	5	0.03	0.45	30	100	50														
SW8-06	Upstream and downstream sites connected. Very high flow, medium water level. Weather fine.	11/06/2020	12:14	5.70	0.17	4.92	19.6	8																					
SW8-06	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	17/08/2020	13:44	6.12	0.16	4.63	18.0	5																					
SW8-06	Upstream and downstream sites connected. High flow, very high water level. Drizzle.	15/12/2020	10:34	5.40	0.12	5.69	23.4	15	1	4	0.11	0.56	30	100	50	0.699	0.001	0.0005	0.001	0.001	0.315	0.001	0.018	0.0003	0.001	0.001	0.0050	0.004	
SW8-06	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	15/02/2021	15:05	5.38	0.21	4.74	28.0	17																					
SW8-06	Upstream and downstream sites connected. High flow, high water level. Weather fine.	6/05/2021	15:59	4.98	0.12	4.66	19.2	5	1	1	0.02	0.65	30	100	50	0.677	0.001	0.0005	0.001	0.001	0.933	0.001	0.012	0.0003	0.001	0.001	0.0005	0.006	
SW8-06	Upstream and downstream connected. Medium flow. Medium water level. Overcast.	11/11/2021	13:19	3.62	0.21	5.22	24.6	55	2	9	0.03	0.37	30	100	50	0.594	0.001	0.0015	0.001	0.002	0.938	0.002	0.028	0.0050	0.001	0.002	0.0050	0.018	
SW8-06	Upstream and downstream sites connected. High flow, high water level. Overcast.	17/05/2022	11:37	3.96	0.11	4.24	21.4	7	1	1	0.05	0.79	30	100	50	0.717	0.001	0.0005	0.001	0.001	1.644	0.001	0.026	0.0003	0.001	0.001	0.0005	0.025	
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					0.26	5.50		27	4	14	0.06	0.68	30	100	50	0.700	0.001	0.0005	0.001	0.001	1.782	0.001	0.026	0.0012	0.001	0.002	0.0050	0.016	
P20				4.13	0.13	4.49																							
St Dev					0.11	0.55																							

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW07		1/02/2013		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW07		28/02/2013		4.11	0.13	4.24	26.5	N/A	3	3	0.10	0.70	50	50	50	0.460	0.001	0.0001	0.001	0.001	1.640	0.001	0.025	0.0001	0.001	0.005	0.0005	0.003
SW07		27/05/2013		8.20	0.15	4.30	19.5	12	3	3	0.02	0.50	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW07		5/07/2013		3.80	0.12	4.50	15.4	3	3	3	0.01	0.50	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW07		29/07/2013		8.90	0.16	4.35	22.6	2	3	3	0.01	0.20	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW07		19/11/2013		6.26	0.60	5.10	25.3	21	3	30	0.04	1.90	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
SW07		25/11/2013		6.50	0.29	6.20	26.7	11	3	11	0.04	1.10	N/A	N/A	N/A	N/A	N/A	0.0001	N/A	0.001	N/A	0.001	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																												
SW8-05		4/08/2016		7.16	0.19	5.79	16.6	5																				
SW8-05	Not possible to obtain accurate turbidity reading due to shallow water.	6/12/2016		6.26	0.17	5.57	35.0		1	14	0.06	0.58	25	50	50													
SW8-05	Water to shallow for DO reading. Reading for other parameters taken in jug.	3/01/2017			0.49	4.59	31.2	63																				
SW8-05	Insufficient water for sampling and monitoring	27/02/2017																										
SW8-05	Heavy rain. Strong flow. Upstream and downstream sites connected.	15/03/2017		6.04	0.09	6.17	23.5	26																				
SW8-05	No access - water over access road	5/04/2017																										
SW8-05	Moderate flow, u/s and d/s sites connected. Overcast.	4/05/2017		5.96	0.20	4.39	20.1	7																				
SW8-05	Not safe to access. Haul road closed due to flooding.	13/06/2017																										
SW8-05	Insufficient water to sample	4/10/2017																										
SW8-05	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	6/11/2017		6.09	0.20	4.80	24.9	17	1	6	0.04	0.44	25	50	50													
SW8-05	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	2/12/2017		8.15	0.23	4.57	24.8	0																				
SW8-05	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	4/01/2018		8.42	0.24	4.79	25.1	0	1	6	0.02	0.21	25	50	50													
SW8-05	Upstream and downstream sites connected. No visible flow, low water level. Water milky blue colour. Rain.	2/02/2018		6.84	0.25	5.10	20.5	90																				
SW8-05	Upstream and downstream sites connected. High flow, very high water level. Rain.	7/03/2018		4.75	0.14	5.46	25.9	60	2	12	0.08	0.76	25	50	50													

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW8-05	Upstream and downstream sites not connected. No visible flow, insufficient water. Weather fine.	19/04/2018																										
SW8-05	No wet weather access to site	1/05/2018																										
SW8-05	No wet weather access to site	8/06/2018																										
SW8-05	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	4/07/2018	11:14	6.05	0.23	4.65	17.1	5	5	24	0.03	0.25	30	250	250													
SW8-05	Insufficient water to sample. Weather fine.	28/08/2018	9:43																									
SW8-05	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	4/09/2018	11:22	7.55	0.35	4.48	15.0	24	2	9	0.07	0.52	30	250	250													
SW8-05	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	11/10/2018	13:56	4.67	0.22	5.02	19.6	28																				
SW8-05	Upstream and downstream sites connected. No visible flow, very low water level. Suspended dark red algae in water column, abundant aquatic vegetation. Weather fine.	20/11/2018	10:05	3.46	0.32	5.64	24.1	24	4	13	0.06	0.24	30	100	50													
SW8-05	Insufficient water to sample, heavy vegetation growth.	24/12/2018	9:54																									
SW8-05	Dry, not sampled.	25/02/2019	15:18																									
SW8-05	Dry, not sampled.	8/03/2019	15:18																									
SW8-05	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	3/04/2019	13:26	7.81	0.30	5.01	25.8	62	3	34	0.04	0.60	30	100	50													
SW8-05	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	25/06/2019	10:06	8.71	0.12	5.61	13.7	51																				
SW8-05	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	5/07/2019	9:51	3.76	0.27	4.96	16.4	19	1	7	0.02	0.34	30	100	50													
SW8-05	Dry, not sampled.	2/12/2019	14:05																									
SW8-05	Upstream and downstream sites connected. Low flow, medium water level. Rain.	18/01/2020	12:11	6.84	0.12	5.73	22.1	16	10	6	0.12	0.49	50	100	50													
SW8-05	Dry, not sampled.	4/02/2020	13:14																									
SW8-05	Upstream and downstream sites connected. Medium flow, high water level. Drizzle.	7/03/2020	13:34	2.13	0.19	4.64	25.3	2	8	3	0.03	0.30	30	240	50													
SW8-05	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	11/04/2020	15:13	4.15	0.16	4.81	26.1	7																				
SW8-05	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	18/05/2020	12:22	4.79	0.19	4.52	19.2	11	2	1	0.03	0.51	30	100	50													
SW8-05	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	11/06/2020	12:17	4.88	0.17	4.63	18.7	8																				
SW8-05	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	17/08/2020	13:41	5.87	0.17	4.36	16.0	3																				
SW8-05	Upstream and downstream sites connected. High flow, very high water level. Drizzle.	15/12/2020	10:30	4.52	0.11	5.27	23.1	12	4	5	0.12	0.59	30	100	50	0.576	0.001	0.0005	0.001	0.001	0.285	0.001	0.020	0.0003	0.001	0.001	0.0050	0.007

SW8-06 - Unnamed tributary of McDonald's Creek CH 135350

Wet Event Monitoring

[illegible]

SW8-08 - McDonald's Creek

Dry Event Monitoring

[illegible]

SW8-08 - McDonald's Creek

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

SW8-08 - McDonald's Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW08		27/08/2013		7.50	0.36	4.00	17.5	2	3	3	1.15	0.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW08		23/09/2013		3.60	0.35	3.90	22.3	2	3	3	0.01	0.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW08		28/10/2013		6.70	0.43	4.40	21.8	5	3	3	0.04	0.80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW08		16/12/2013		2.00	0.56	3.40	23.0	1	3	6	0.03	0.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Upstream Monitoring																												
SW8-07	Photo taken	10/08/2016		3.32	0.25	4.88	14.4	0																				
SW8-07		9/09/2016		2.92	0.29	4.35	17.1	27	4	25	0.07	0.97	25	50	50													
SW8-07		11/10/2016		0.69	0.35	4.78	17.7	130																				
SW8-07	Insufficient water to enable accurate DO reading.	2/11/2016			0.51	5.35	21.9	11	6	19	0.21	2.17	25	50	50													
SW8-07	Insufficient water to enable accurate DO reading.	14/12/2016			0.52	4.05	26.1	8																				
SW8-07	Very low water level, no visible flow. Dense aquatic vegetation and scum layer visible.	17/01/2017		0.38	0.39	5.25	25.5	7	4	166	0.66	3.00	25	50	50													
SW8-07	Very low water level. Thick aquatic veg.	3/02/2017		1.73	0.38	4.95	25.0	14																				
SW8-07	Low water level. No observed flow. Upstream and downstream sites connected.	13/03/2017		0.48	0.46	4.42	20.7	1	1	1	0.02	0.40	25	50	50													
SW8-07	Slight flow. U/s and d/s sites connected. Drizzle.	26/04/2017		2.28	0.25	4.32	18.6	8																				
SW8-07	Upstream and downstream sites connected. Moderate flow, medium water level. Weather fine.	23/05/2017		4.12	0.18	4.20	18.7	6	4	2	0.01	0.63	25	50	50													
SW8-07	Upstream and downstream sites connected. Slight flow. Moderate to high water level. Weather fine.	9/06/2017		4.94	0.26	4.20	15.6	6																				
SW8-07	Upstream and downstream sites connected. Low flow, medium water level. Riffle section upstream of sample point. Weather fine.	13/07/2017		9.55	0.19	4.06	14.1	0	1	1	0.02	0.45	25	50	50													
SW8-07	Dewatering in progress, sandbags and pump installed, no connection between upstream and downstream sites. No visible flow. Mid water level. Weather fine.	4/08/2017		5.57	0.21	3.60	13.4	8																				
SW8-07	Fine weather. U/S and D/S connection blocked by construction works. No observed flow. Low water level. Algal bloom likely to have caused a temporary spike in DO.	7/09/2017		12.15	0.43	3.85	16.3	16	3	2	0.03	0.27	25	50	50													
SW8-07	Upstream and downstream sites connected. Low water level, medium flow. Weather fine.	25/10/2017		2.50	0.29	4.41	20.1	0																				
SW8-07	Upstream and downstream sites connected. Gentle flow, low water level. Sulphur odour. Weather fine.	22/11/2017		0.35	0.28	4.63	18.8	3	3	1	0.02	0.50	25	50	50													

SW8-08 - McDonald's Creek

Dry Event Monitoring

[illegible]

SW8-08 - McDonald's Creek

Dry Event Monitoring

[illegible]

SW8-08 - McDonald's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW8-08	Photo taken. Accurate turbidity reading could not be obtained	4/08/2016		5.07	0.22	4.95	14.2																						
SW8-08		25/08/2016		3.63	0.16	4.33	16.3	3	14	2	0.03	0.68	25	50	50														
SW8-08		6/12/2016		6.01	0.66	4.06	28.2	15	1	8	0.05	0.79	25	50	50														
SW8-08		8/12/2016		2.29	0.59	4.14	22.8	2																					
SW8-08	Continuous waterway but no visible flow.	3/01/2017		0.34	0.40	4.85	25.2	19																					
SW8-08	No visible flow.	6/01/2017		2.80	0.61	4.12	24.4	5	2	22	0.06	0.95	25	50	50														
SW8-08	Very low water level. Thick aquatic veg. Accurate turbidity and DO readings could not be obtained due to insufficient water.	27/02/2017			0.41	5.71	22.5		2	42	0.25	3.28	25	50	50														
SW8-08	Steady flow. Upstream and downstream sites connected.	16/03/2017		1.93	0.19	4.31	22.2	3																					
SW8-08	Channel full of water with slight flow. Channel has overtopped banks. Tannin stained water.	20/03/2017		2.23	0.14	4.32	24.1	0																					
SW8-08	Very high water level. U/s and d/s sites connected. Steady flow.	5/04/2017		0.00	0.08	5.38	19.6	30	2	6	0.20	2.13	25	50	50														
SW8-08	No access - demolition in progress	4/05/2017																											
SW8-08	Fine weather. U/s and d/s connected. Steady flow with a high water level.	11/05/2017		3.68	0.19	4.24	17.3	5	3	4	0.02	0.66	25	50	50														
SW8-08	Upstream and downstream sites connected. Sample point approx. 10 m N of designated site due to high water level. Slight flow. Water level very high. Sample taken amongst aquatic vegetation.	14/06/2017		3.32	0.06	4.69	16.8	2	1	1	0.02	0.60	25	50	50														
SW8-08	Upstream and downstream sites connected. Moderate flow. High water level. Rain.	17/06/2017		3.10	0.26	4.45	17.6	0																					
SW8-08	Upstream and downstream sites connected. Steady flow, moderate water level. Weather fine.	4/10/2017		0.75	0.41	6.61	21.4	46																					
SW8-08	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	16/10/2017		4.68	0.24	4.93	20.4	0	2	4	0.03	1.28	25	50	50														
SW8-08	Upstream and downstream sites connected. Medium flow. Medium - high water level. Weather, clearing.	6/11/2017		3.46	0.20	4.85	22.4	12																					
SW8-08	Upstream and downstream sites connected. Low flow, medium water level. Weather; fine.	7/11/2017		3.39	0.20	4.59	22.5	2	1	7	0.04	1.02	25	50	50														
SW8-08	Upstream and downstream sites connected. Slight flow, low water level. Overcast.	2/12/2017		0.75	0.28	5.55	23.7	2																					
SW8-08	Upstream and downstream sites connected. Low flow, medium water level. Surface scum layer. Overcast.	22/12/2017		1.09	0.36	5.80	25.9	41																					
SW8-08	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	4/01/2018		4.81	0.23	4.95	25.3	23	1	2	0.03	0.75	25	50	50														

SW8-08 - McDonald's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW8-08	Upstream and downstream sites not connected. No visible flow, low water level. Slight light brown scum layer. Weather fine	31/01/2018		0.00	0.37	6.23	23.6	9	1	5	0.06	0.60	25	50	50													
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Rain.	2/02/2018		0.41	0.34	6.14	20.8	14																				
SW8-08	Upstream and downstream sites connected. Low flow, high water level. Overcast.	5/02/2018		5.05	0.34	5.27	24.1	14	3	13	0.06	1.06	25	50	50													
SW8-08	Upstream and downstream sites connected. High flow, very high water level. Rain.	7/03/2018		2.69	0.17	4.18	23.8	0	1	10	0.05	1.76	25	50	50													
SW8-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	19/04/2018		0.00	0.32	6.14	22.3	11																				
SW8-08	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	23/04/2018		1.93	0.32	5.80	21.3	7																				
SW8-08	No wet weather access to site	1/05/2018																										
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	10/05/2018		3.42	0.24	4.72	19.8	26	1	12	0.04	0.64	30	250	250													
SW8-08	No wet weather access to site.	8/06/2018																										
SW8-08	Upstream and downstream sites connected. Very low flow, high water level. Overcast.	4/07/2018	10:27	4.24	0.21	5.24	16.0	7	1	5	0.03	1.05	30	250	250													
SW8-08	Upstream and downstream sites connected. No visible flow, low water level. Slight scum layer. Weather fine.	28/08/2018	10:01	0.70	0.35	6.23	14.8	11																				
SW8-08	Upstream and downstream sites connected. Low flow, high water level. Drizzle.	4/09/2018	10:25	3.24	0.61	5.48	15.1	72	4	40	0.05	1.99	30	250	250													
SW8-08	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	7/09/2018	9:37	3.62	0.47	5.40	15.9	2																				
SW8-08	Upstream and downstream sites connected. No visible flow, high water level. Drizzle.	11/10/2018	12:50	1.80	0.34	5.89	18.8	82																				
SW8-08	Upstream and downstream sites connected. High flow, high water level. Drizzle.	15/10/2018	10:54	3.66	0.18	4.48	18.1	6	1	1	0.02	0.88	30	100	50													
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Brown algae present. Weather fine.	20/11/2018	10:56	0.00	0.35	5.98	19.9	0	3	7	0.03	0.32	30	100	50													
SW8-08	Upstream and downstream sites connected. Very low flow, high water level. Brown algae present. Weather fine.	22/11/2018	13:13	0.66	0.34	6.03	22.3	4																				
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Green and brown algae present, heavy aquatic vegetation. Drizzle.	24/12/2018	9:13	0.04	0.41	6.07	21.0	23																				
SW8-08	Sampled in an isolated pool of water with no visible flow and very low water level. Drizzle.	25/02/2019	15:47	0.52	0.50	7.25	22.8	202	5	70	0.60	7.03	30	290	50													
SW8-08	Sampled in an isolated pool of water with no visible flow and very low water level. Weather fine.	8/03/2019	15:35	0.84	0.47	7.03	24.5	35																				

SW8-08 - McDonald's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW8-08	Sampled in an isolated pool of water with no visible flow and low water level. Rain.	16/03/2019	8:17	1.73	0.39	6.84	21.6	40	1	24	0.17	2.81	30	100	50													
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	3/04/2019	14:36	1.36	0.57	6.01	21.8	32	1	15	0.04	2.26	30	100	50													
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Heavy aquatic vegetation. Weather fine.	18/04/2019	10:31	0.68	0.49	6.25	19.8	4																				
SW8-08	Upstream and downstream sites connected. High flow, high water level. Rain.	25/06/2019	8:56	6.13	0.49	5.15	14.5	38																				
SW8-08	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	27/06/2019	11:37	3.91	0.41	5.03	15.7	15	1	10	0.03	0.82	30	100	50													
SW8-08	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	5/07/2019	9:05	2.29	0.42	4.83	16.5	9	3	12	0.02	0.86	30	100	50													
SW8-08	Sampled in an isolated pool with no visible flow, very low water level. Weather fine.	2/12/2019	13:42	0.00	0.44	6.40	24.4	51																				
SW8-08	Sampled in an isolated pool with no visible flow, very low water level. Green algae. Weather fine.	27/12/2019	12:58	2.68	0.60	6.77	24.3	4																				
SW8-08	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	18/01/2020	12:43	4.66	0.44	5.80	23.1	348	1	205	0.21	3.04	50	100	50													
SW8-08	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/02/2020	13:02	0.00	0.59	5.86	23.2	89																				
SW8-08	Upstream and downstream sites connected. High flow, very high water level. Rain.	7/02/2020	9:56	8.10	0.47	4.77	22.5	8	2	6	0.04	1.18	30	460	200													
SW8-08	Upstream and downstream sites connected. Very low flow, medium water level. Drizzle.	7/03/2020	13:58	2.14	0.26	4.30	24.2	0																				
SW8-08	Upstream and downstream sites connected. Low flow, high water level. Overcast.	11/03/2020	8:31	1.99	0.24	4.33	21.8	0	9	1	0.02	0.65	30	100	50													
SW8-08	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	11/04/2020	15:22	2.40	0.24	4.52	21.8	1																				
SW8-08	Upstream and downstream sites connected. Very low flow, high water level. Overcast.	18/05/2020	12:38	2.95	0.28	4.94	18.3	6	5	3	0.03	0.70	30	100	50													
SW8-08	Upstream and downstream sites connected. Low flow, high water level. Weather fine.	11/06/2020	12:24	2.57	0.30	5.31	18.1	7																				
SW8-08	Upstream and downstream sites connected. No visible flow, medium water level. Weather, fine.	15/06/2020	13:20	3.40	0.24	4.64	17.5	2	2	1	0.03	0.64	30	100	50													
SW8-08	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	17/08/2020	13:57	2.51	0.22	4.87	15.1	3																				
SW8-08	Upstream and downstream sites connected. High flow, very high water level. Drizzle.	15/12/2020	10:10	3.69	0.38	3.80	22.1	3	3	1	0.04	0.63	30	100	50	0.860	0.001	0.0005	0.001	0.001	0.331	0.001	0.054	0.0003	0.002	0.001	0.0050	0.006
SW8-08	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	15/02/2021	14:50	0.32	0.31	5.46	23.0	17	1	1	0.03	0.66	30	100	50	0.621	0.001	0.0005	0.001	0.001	1.125	0.001	0.067	0.0003	0.002	0.001	0.0005	0.016
SW8-08	Upstream and downstream connected. No visable flow. Medium water level. Overcast.	11/11/2021	13:33	3.77	0.29	5.65	22.3	9	2	3	0.03	0.42	30	310	50	0.432	0.001	0.0015	0.002	0.002	1.715	0.002	0.092	0.0050	0.003	0.002	0.0050	0.024

SW8-08 - McDonald's Creek

Wet Event Monitoring

[illegible]

SW8-08 - McDonald's Creek

Wet Event Monitoring

[illegible]

SW8-08 - McDonald's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW8-07	Upstream and downstream sites connected. Sample point approx. 10 m N of designated site due to high water level. Slight flow. Water level very high. Sample taken amongst aquatic vegetation.	14/06/2017		3.06	0.06	4.72	16.8	9	1	35	0.13	1.51	25	50	50													
SW8-07	Upstream and downstream sites connected. Moderate flow. High water level. Rain.	17/06/2017		3.04	0.12	4.89	17.4	0																				
SW8-07	Upstream and downstream sites connected. Steady flow, very low water level. Weather fine.	4/10/2017		5.64	0.51	4.21	24.6	10																				
SW8-07	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	16/10/2017		5.90	0.21	3.98	20.5	0	1	0	0.02	0.99	25	50	50													
SW8-07	Upstream and downstream sites connected. Medium - high flow. Medium - high water level. Weather, clearing.	6/11/2017		3.46	0.20	4.10	21.9	4																				
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Weather, fine.	7/11/2017		3.70	0.20	3.99	23.2	13	1	5	0.03	0.78	25	50	50													
SW8-07	Upstream and downstream sites connected. Slight flow, low water level. Overcast.	2/12/2017		0.48	0.28	4.65	21.6	0																				
SW8-07	Upstream and downstream sites connected. Medium flow, low water level. Odour. Overcast.	22/12/2017		8.09	0.38	4.39	23.5	1																				
SW8-07	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	4/01/2018		2.02	0.24	4.30	23.3	0	4	1	0.02	0.79	25	50	50													
SW8-07	Insufficient water to sample. No visible flow. Weather fine	31/01/2018																										
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Sulfur smell. Rain.	2/02/2018		3.46	0.49	4.22	19.9	14																				
SW8-07	Upstream and downstream sites connected. High flow, low water level. Sulfur smell. Overcast.	5/02/2018		7.30	0.26	3.92	24.2	19	2	1	0.03	0.63	25	50	50													
SW8-07	Upstream and downstream sites connected. High flow, very high water level. Rain.	7/03/2018		2.64	0.25	4.64	23.4	0	1	1	0.03	1.08	25	50	50													
SW8-07	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	19/04/2018		1.44	0.35	4.95	21.0	12																				
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	23/04/2018		3.36	0.37	4.48	19.8	4																				
SW8-07	No wet weather access to site	1/05/2018																										
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	10/05/2018		1.98	0.26	4.43	18.8	3	1	2	0.02	0.65	30	250	250													
SW8-07	No wet weather access to site.	8/06/2018																										
SW8-07	Upstream and downstream sites connected. Medium flow, high water level. Overcast.	4/07/2018	10:34	7.20	0.15	3.89	15.6	5	1	2	0.02	0.67	30	250	250													
SW8-07	Upstream and downstream sites connected. No visible flow, very low water level. Heavy aquatic vegetation, green algae present. Weather fine.	28/08/2018	9:56	0.46	0.37	5.14	13.5	25																				

SW8-08 - McDonald's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Rain.	4/09/2018	10:17	6.30	0.69	4.39	14.0	5	3	5	0.03	0.79	30	250	250													
SW8-07	Upstream and downstream sites connected. Medium flow, high water level. Weather fine.	7/09/2018	9:46	3.70	0.48	3.89	14.9	0																				
SW8-07	Upstream and downstream sites connected. Low flow, low water level. Drizzle.	11/10/2018	12:44	4.80	0.31	4.46	18.5	9																				
SW8-07	Upstream and downstream sites connected. Very high flow, high water level. Drizzle.	15/10/2018	11:13	2.45	0.20	4.21	17.9	0	1	1	0.02	0.82	30	100	50													
SW8-07	Upstream and downstream sites connected. Low flow, low water level. Abundant aquatic vegetation, green algae and light scum layer present. Weather fine.	20/11/2018	10:42	3.65	0.37	4.54	21.6	0	1	64	0.23	3.71	30	100	50													
SW8-07	Upstream and downstream sites connected. Medium flow, low water level. Green and brown algae present. Weather fine.	22/11/2018	13:08	0.96	0.31	5.06	22.4	2																				
SW8-07	Upstream and downstream sites connected. No visible flow, very low water level. Green algae present, slight odour. Rain.	24/12/2018	9:05	0.32	0.40	5.12	21.7	30																				
SW8-07	Dry, not sampled.	25/02/2019	15:35																									
SW8-07	Dry, not sampled.	8/03/2019	15:24																									
SW8-07	Insufficient water to sample.	16/03/2019	8:11																									
SW8-07	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	3/04/2019	14:28	2.07	0.93	4.02	21.7	4	1	12	0.05	1.26	30	100	50													
SW8-07	Upstream and downstream sites connected. Very low flow, very low water level. Odour, heavy aquatic vegetation. Weather fine.	18/04/2019	10:25	2.22	0.79	4.44	19.7	2																				
SW8-07	Upstream and downstream sites connected. High flow, high water level. Rain.	25/06/2019	8:48	7.71	0.24	4.62	13.1	13																				
SW8-07	Upstream and downstream sites connected. High flow, high water level. Weather fine.	27/06/2019	11:44	3.53	0.42	4.14	15.4	9	2	3	0.03	0.91	30	100	50													
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	5/07/2019	9:00	2.77	0.48	4.25	16.0	7	1	1	0.01	0.56	30	100	50													
SW8-07	Dry, not sampled.	2/12/2019	13:48																									
SW8-07	Dry, not sampled.	27/12/2019	13:02																									
SW8-07	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	18/01/2020	12:35	5.49	0.77	4.04	22.1	9	8	5	0.07	1.29	620	560	50													
SW8-07	Insufficient water to sample.	4/02/2020	13:00																									
SW8-07	Upstream and downstream sites connected. Very high flow, very high water level. Rain.	7/02/2020	9:49	1.73	0.49	4.88	22.5	8	2	4	0.05	1.17	30	430	180													
SW8-07	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	7/03/2020	13:51	3.35	0.24	3.98	24.7	7																				
SW8-07	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	11/03/2020	8:36	2.74	0.23	4.03	21.8	10	4	38	0.03	1.00	30	100	50													

SW8-08 - McDonald's Creek

Wet Event Monitoring

[illegible]

SW9-01 - Montis Gully

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Downstream Monitoring																												
SW9-01	Not safe to access	10/08/2016																										
SW9-01	Not safe to access	9/09/2016																										
SW9-01	Not safe to access	11/10/2016																										
SW9-01	Not safe to access	2/11/2016																										
SW9-01	Not safe to access	14/12/2016																										
SW9-01	Not safe to access	17/01/2017																										
SW9-01	Not safe to access	3/02/2017																										
SW9-01	Not safe to access	13/03/2017																										
SW9-01	Not safe to access	26/04/2017																										
SW9-01	Gentle flow. Medium water level. Dense aquatic vegetation. Weather fine.	23/05/2017		9.05	0.18	3.93	20.7	16	3	40	0.09	1.78	25	50	50													
SW9-01	Moderate water level. Low to moderate flow. Drizzle.	9/06/2017		5.22	0.17	5.37	18.0	92																				
SW9-01	Steady flow. Medium water level. Weather fine.	13/07/2017		6.88	0.14	4.49	15.7	36	1	13	0.10	0.87	25	50	50													
SW9-01	No visible flow. Low water level. Weather fine.	4/08/2017		5.35	0.16	5.52	18.1	10																				
SW9-01	Weather fine. No observed flow and low water level.	7/09/2017		3.98	0.17	5.71	21.4	6	2	21	0.06	0.44	25	50	50													
SW9-01	No observed flow. Isolated pool. D/S and U/S not connected. Tannin stained. Fine weather.	25/10/2017		5.22	0.17	6.11	28.3	15																				
SW9-01	No visible flow, low water level. Weather fine.	22/11/2017		4.30	0.22	6.00	23.9	32	4	12	0.08	0.79	25	50	50													
SW9-01	Insufficient water to sample. Weather fine.	15/12/2017																										
SW9-01	No visible flow, very low water level. Unable to obtain accurate turbidity measurement due to low water level and aquatic vegetation/ algae growth. Weather fine.	23/01/2018		8.57	0.13	5.43	31.5		3	167	0.15	1.15	25	50	50													
SW9-01	No visible flow, very low water level. Insufficient water level for DO measurement. Brown algae present. Weather fine.	14/02/2018			0.21	6.11	34.5	45																				
SW9-01	Upstream and downstream sites not connected. No visible flow, medium water level. Brown algae present. Weather fine.	15/03/2018		7.33	0.16	6.61	27.9	20	1	41	0.10	0.53	25	50	50													
SW9-01	No visible flow, low water level. Weather fine.	5/04/2018		10.62	0.25	6.45	26.5	117																				
SW9-01	No visible flow, medium water level. Weather fine.	3/05/2018		5.05	0.23	6.45	22.8	34	4	6	0.04	0.55	30	250	250													
SW9-01	No visible flow, low water level. Brown algae present and light scum layer on surface. Weather fine.	15/06/2018	12:46	4.14	0.20	6.08	16.4	51																				
SW9-01	No visible flow, low water level. Weather fine.	17/07/2018	14:40	7.33	0.16	5.87	15.6	11	1	117	0.13	1.17	30	250	250													

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW9-01	No visible flow, low water level. Brown and green algae present. Weather fine.	9/08/2018	11:35	5.22	0.19	5.84	14.7	15																				
SW9-01	No visible flow, low water level. Light drizzle.	24/09/2018	8:30	1.72	0.13	5.62	17.3	49	4	28	0.03	0.23	30	250	250													
SW9-01	No visible flow, very low water level. Brown algae present. Weather fine.	3/10/2018	11:52	4.56	0.17	6.10	24.6	25																				
SW9-01	No visible flow, low water level. Heavy aquatic vegetation and brown algae present. Drizzle.	8/11/2018	10:19	0.30	0.25	6.27	21.7	34	3	97	0.11	1.22	30	350	50													
SW9-01	No visible flow, low water level. Algae present. Weather fine.	11/12/2018	8:31	0.21	0.18	6.08	20.3	40																				
SW9-01	Insufficient water to sample.	15/01/2019	8:48																									
SW9-01	Dry, not sampled.	13/02/2019	11:42																									
SW9-01	Insufficient water to sample.	15/03/2019	9:40																									
SW9-01	No visible flow, medium water level. Rain.	11/04/2019	11:55	6.24	0.21	5.80	22.0	49																				
SW9-01B	Monitoring site relocated to new location approx. 1 km east. Upstream and downstream sites connected. No visible flow, low water level. Fine.	8/05/2019	15:16	0.72	1.70	3.16	18.7	0	3	6	0.02	0.02	30	100	50													
SW9-01B	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/06/2019	13:26	0.25	1.58	3.20	16.0	6																				
SW9-01B	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	9/07/2019	13:59	1.96	0.47	3.43	16.5	19	1	29	0.03	1.25	30	100	50													
SW9-01B	Upstream and downstream sites connected. No visible flow, medium water level. Surface bacteria layer in patches, red algae. Weather fine.	8/08/2019	12:52	0.00	0.55	3.50	18.2	6																				
SW9-01B	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	11/09/2019	8:50	1.40	0.58	3.45	13.7	5	1	10	0.01	0.15	30	100	50													
SW9-01B	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	2/10/2019	10:00	2.08	0.39	4.64	19.0	29																				
SW9-01B	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	6/11/2019	9:57	0.14	0.39	6.21	19.6	231	1	51	0.03	0.99	30	100	50													
SW9-01B	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	5/12/2019	12:00	0.00	0.44	6.20	26.0	130																				
SW9-01B	Upstream and downstream sites not connected. No visible flow, low water level. Bacteria layer on surface. Weather fine.	9/01/2020	10:13	0.68	0.58	6.40	24.2	65	8	39	0.05	0.89	30	100	50													
SW9-01B	Upstream and downstream sites connected. Very low flow, high water level. Weather fine.	17/02/2020	14:14	0.00	0.27	4.31	27.3	6																				
SW9-01B	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	5/03/2020	13:13	0.29	0.67	3.37	25.2	33	1	3	0.02	0.01	30	100	50													
SW9-01B	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	1/04/2020	12:37	0.55	0.69	3.35	22.1	20																				

Dry Event Monitoring

Upstream Monitoring

SW9-01 - Montis Gully

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Downstream Monitoring																												
SW9-01	Accurate turbidity reading could not be obtained.	4/08/2016		6.72	0.24	4.53	14.4																					
SW9-01	No access	7/12/2016																										
SW9-01	No access	3/01/2016																										
SW9-01	No access	27/02/2016																										
SW9-01	No access	15/03/2017																										
SW9-01	No access	5/04/2017																										
SW9-01	No access	4/05/2017																										
SW9-01	No visible flow. Very high water level. Sample point approx. 20 m SW of designated site due to high water level. Drizzle.	14/06/2017		5.55	0.07	4.63	16.4	15	1	9	0.08	0.82	25	50	50													
SW9-01	Gentle flow, moderate water level. Weather fine.	4/10/2017		2.77	0.36	6.06	21.1	23																				
SW9-01	No visible flow. High water level. Overcast.	6/11/2017		1.57	0.19	6.18	22.0	83	1	16	0.08	0.79	25	50	50													
SW9-01	No visible flow, high water level. Overcast.	22/12/2017		1.86	0.21	6.38	24.7	89																				
SW9-01	No visible flow. Moderate to high water level. Overcast.	2/01/2018		4.47	0.29	6.17	30.5	8	1	11	0.07	1.14	13	50	50													
SW9-01	No visible flow, low water level. Rain.	2/02/2018		3.29	0.20	5.35	20.1	19																				
SW9-01	Very low flow, high water level. Rain.	6/03/2018		5.00	0.20	6.82	24.6	55	2	5	0.06	0.50	25	50	50													
SW9-01	Low flow, high water level. Overcast.	23/04/2018		8.09	0.27	6.58	21.1	319																				
SW9-01	Very low flow, medium water level. Overcast.	1/05/2018		3.72	0.22	7.03	19.0	32	1	59	0.14	1.26	25	50	50													
SW9-01	Low flow, medium water level. Weather fine.	8/06/2018	12:25	3.47	0.23	6.27	17.5	98																				
SW9-01	Low flow, medium water level. Overcast.	4/07/2018	9:57	4.85	0.22	6.15	16.3	743	1	600	0.68	5.67	30	250	250													
SW9-01	No visible flow, very low water level. Weather fine.	27/08/2018	14:25	8.28	0.16	6.77	19.6	36																				
SW9-01	Medium flow, medium water level. Drizzle.	4/09/2018	12:53	5.76	0.46	5.86	17.0	265	3	61	0.09	1.15	30	250	250													
SW9-01	No visible flow, low water level. Rain.	11/10/2018	12:18	4.53	0.20	6.14	19.0	43																				
SW9-01	Low water level, no visible flow. Heavy aquatic vegetation, brown algae, light scum layer. Weather fine.	12/11/2018	10:16	1.73	0.19	6.39	20.8	38	1	21	0.03	0.33	30	100	50													
SW9-01	No visible flow, very low water level. Heavy aquatic vegetation growth, brown algae present. Overcast.	24/12/2018	11:06	2.29	0.43	6.68	24.9	202																				
SW9-01	Dry, not sampled.	22/02/2019	11:36																									
SW9-01	Low flow, very low water level. Abundant aquatic vegetation, slight algae growth. Rain.	16/03/2019	8:42	4.51	0.37	4.86	21.9	86																				
SW9-01	No visible flow, medium water level. Overcast.	3/04/2019	12:17	3.43	0.46	6.18	22.8	183	1	89	0.06	0.82	30	100	50													

SW9-01 - Montis Gully

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW9-01B	Monitoring site relocated to new location approx. 1 km east. Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	24/05/2019	13:54	0.58	1.66	2.87	19.7	8																				
SW9-01B	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/06/2019	13:52	0.69	1.49	3.19	18.3	15	3	15	0.02	0.14	30	100	50													
SW9-01B	Upstream and downstream sites connected. Very low flow, medium water level. Overcast.	8/07/2019	9:43	3.37	0.32	5.59	16.9	92																				
SW9-01B	Upstream and downstream sites connected. Very low flow, medium water level. Red algae, heavy aquatic vegetation. Overcast.	2/08/2019	12:11	0.00	0.64	3.50	16.5	102	1	65	0.07	0.42	30	100	50													
SW9-01B	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	2/12/2019	13:12	0.52	0.43	5.86	25.0	114																				
SW9-01B	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	18/01/2020	13:17	3.19	0.35	6.05	24.0	524	3	253	0.19	2.77	50	100	50													
SW9-01B	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	4/02/2020	12:31	0.70	0.53	5.71	24.1	63																				
SW9-01B	Upstream and downstream sites connected. Medium flow, high water level. Rain.	7/03/2020	14:23	0.76	0.64	3.41	24.7	15	2	26	0.03	0.01	30	230	50													
SW9-01B	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	9/04/2020	7:51	1.31	0.58	3.77	20.5	40																				
SW9-01B	Upstream and downstream sites connected. Low flow, medium water level. Surface bacteria layer. Weather fine.	7/05/2020	11:52	1.70	0.61	3.68	19.6	32	3	129	0.03	0.09	30	100	50													
SW9-01B	Upstream and downstream sites connected. Low flow, medium water level. Surface bacteria layer. Weather fine.	1/06/2020	10:58	2.52	0.53	3.44	16.6	37																				
SW9-01B	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	8/08/2020	12:41	4.34	0.31	3.67	16.3	14																				
SW9-01B	Upstream and downstream sites connected. High flow, very high water level. Drizzle.	15/12/2020	9:49	5.46	0.36	3.35	22.3	7	5	1	0.10	0.58	30	100	50	2.352	0.001	0.0005	0.001	0.002	3.336	0.001	0.089	0.0003	0.007	0.001	0.0050	0.030
SW9-01B	Upstream and downstream sites connected. No visible flow, medium water level. Surface scum layer. Weather fine.	4/02/2021	10:27	0.20	0.28	5.77	24.0	14																				
SW9-01B	Upstream and downstream sites connected. High flow, high water level. Weather fine.	3/05/2021	14:56	1.42	0.16	4.45	19.6	7	4	1	0.04	0.66	30	100	50	0.958	0.001	0.0005	0.001	0.001	5.158	0.001	0.032	0.0003	0.002	0.001	0.0005	0.008
SW9-01 B	Upstream and downstream connected. No visable flow. High water level. Drizzle.	11/11/2021	14:18	2.26	0.23	5.46	26.1	100	3	15	0.06	0.75	30	710	200	1.391	0.001	0.0015	0.002	0.001	9.243	0.002	0.092	0.0050	0.009	0.001	0.0050	0.041
SW9-01 B	Upstream and downstream sites connected. Medium flow, high water level. Overcast.	17/05/2022	8:16	0.57	0.12	3.80	20.9	7	2	1	0.13	1.36	30	100	50	0.925	0.001	0.0005	0.001	0.001	4.459	0.001	0.028	0.0003	0.001	0.001	0.0005	0.046
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.75	5.00		23	3	27	0.13	0.97	30	100	50	1.569	0.001	0.0009	0.001	0.002	7.725	0.001	0.060	0.0022	0.006	0.001	0.0050	0.032

Wet Event Monitoring

[illegible]

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time																									
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
No upstream monitoring site																												
No upstream monitoring site																												
No upstream monitoring site																												
No upstream monitoring site																												
No upstream monitoring site																												
No upstream monitoring site																												
No upstream monitoring site																												
No upstream monitoring site																												
No upstream monitoring site																												
SW9-01A	New upstream monitoring location established. Upstream and downstream sites connected. Low flow, low water level. Weather fine.	24/05/2019	13:47	1.48	1.82	2.92	19.9	0																				
SW9-01A	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	3/06/2019	13:42	2.99	1.50	3.20	17.6	4	2	1	0.02	0.03	30	100	50													
SW9-01A	Upstream and downstream sites connected. Very low flow, high water level. Drizzle.	8/07/2019	9:35	3.32	0.42	3.50	15.7	9																				
SW9-01A	Upstream and downstream sites connected. Very low flow, medium water level. Red algae, heavy aquatic vegetation. Overcast.	2/08/2019	12:03	0.00	0.67	3.46	16.4	14	2	22	0.04	0.13	30	100	50													
SW9-01A	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	2/12/2019	13:06	1.84	0.90	4.18	28.1	27																				
SW9-01A	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	18/01/2020	13:09	3.04	0.38	5.02	23.4	212	1	115	0.13	1.27	50	100	50													
SW9-01A	Upstream and downstream sites connected. No visible flow, low water level. Drizzle.	4/02/2020	12:35	0.47	1.05	3.28	24.7	38																				
SW9-01A	Upstream and downstream sites connected. Very low flow, high water level. Rain.	7/03/2020	14:17	0.89	0.64	3.33	24.5	22	9	46	0.04	0.01	30	100	50													
SW9-01A	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	9/04/2020	7:45	2.07	0.77	3.49	19.5	22																				
SW9-01A	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	7/05/2020	11:46	1.85	0.73	3.57	18.6	20	1	12	0.02	0.05	30	100	50													
SW9-01A	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	1/06/2020	11:03	2.47	0.51	3.39	17.1	23																				
SW9-01A	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	8/08/2020	12:43	4.17	0.30	3.68	17.5	4																				
SW9-01A	Upstream and downstream sites connected. High flow, very high water level. Drizzle.	15/12/2020	9:46	3.91	0.38	3.43	22.3	5	1	3	0.10	0.59	30	2600	2400	2.256	0.001	0.0005	0.001	0.002	3.227	0.001	0.084	0.0003	0.007	0.001	0.0050	0.031
SW9-01 A	Upstream and downstream sites connected. No visible flow, very high water level. Weather fine.	4/02/2021	10:21	0.50	0.28	4.82	22.7	2																				

SW9-01 - Montis Gully

Wet Event Monitoring

[illegible]

SW9-03 - Everson's Creek

Dry Event Monitoring

[illegible]

SW9-03 - Everson's Creek

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

SW9-03 - Everson's Creek

Dry Event Monitoring

[illegible]

SW9-03 - Everson's Creek

Dry Event Monitoring

[illegible]

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time																									
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Light scum layer on surface. Light drizzle.	24/09/2018	7:55	1.75	0.23	4.67	16.8	12	1	1	0.54	1.61	30	250	250													
SW9-02	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	3/10/2018	12:23	6.00	0.23	5.00	21.3	37																				
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Tannins and dust layer present. Drizzle.	8/11/2018	10:55	0.55	0.20	4.77	21.0	31	1	4	0.57	1.88	30	230	50													
SW9-02	Insufficient water to sample	11/12/2018	8:58																									
SW9-02	Dry, not sampled.	15/01/2019	9:42																									
SW9-02	Dry, not sampled.	13/02/2019	12:10																									
SW9-02	Dry, not sampled.	15/03/2019	9:34																									
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Rain.	11/04/2019	9:52	3.15	0.88	4.62	19.2	8																				
SW9-02	Dry, not sampled.	8/05/2019																										
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	5/06/2019	12:51	2.48	0.55	5.04	13.9	3																				
SW9-02	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	9/07/2019	14:31	2.34	0.43	4.23	16.1	10	1	3	0.87	2.31	30	100	50													
SW9-02	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	8/08/2019	12:24	1.41	0.38	4.22	19.8	5																				
SW9-02	Insufficient water to monitor.	11/09/2019	9:16																									
SW9-02	Dry, not sampled.	2/10/2019	10:23																									
SW9-02	Dry, not sampled.	6/11/2019	10:20																									
SW9-02	Dry, not sampled.	5/12/2019	11:41																									
SW9-02	Insufficient water to sample.	9/01/2020	10:00																									
SW9-02	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	17/02/2020	14:39	0.00	0.24	5.05	26.5	0																				
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	5/03/2020	14:01	0.76	0.30	4.27	25.7	0	1	3	0.62	2.40	30	100	50													
SW9-02	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Weather fine.	1/04/2020	12:05	1.41	0.33	4.35	22.4	3																				
SW9-02	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	14/05/2020	15:06	1.66	0.32	4.11	17.6	3	2	1	0.35	1.99	30	100	50													
SW9-02	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Drizzle.	8/07/2020	9:47	2.02	0.29	4.24	11.6	7																				
SW9-02	Dry, not sampled.	17/11/2020																										

SW9-03 - Everson's Creek

Dry Event Monitoring

[illegible]

SW9-03 - Everson's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW9-03	No access	4/08/2016																											
SW9-03	No access	7/12/2016																											
SW9-03	No access	3/01/2017																											
SW9-03	No flow. Overcast	28/02/2017		3.04	0.52	4.04	22.5	12	4	6	0.20	0.62	25	50	50														
SW9-03	Steady flow. Upstream and downstream sites connected.	16/03/2017		2.34	0.29	4.17	22.3	7																					
SW9-03	No entry - gate locked	5/04/2017																											
SW9-03	Slight flow, u/s and d/s sites connected. Tannin stained water. Light drizzle.	4/05/2017		2.41	0.25	4.74	18.7	67																					
SW9-03	Upstream and downstream sites connected. Moderate flow. Moderate to high water level. Overcast.	14/06/2017		4.04	0.10	4.98	16.8	11	2	3	0.37	0.94	25	50	50														
SW9-03	Upstream and downstream sites not connected. No visible flow. Very low water level - unable to obtain DO measurment. Dust layer on surface. Weather fine.	4/10/2017			0.39	4.62	23.5	23																					
SW9-03	Unable to determine if upstream and downstream sites connected. No visible flow. Medium water level. Overcast.	6/11/2017		2.22	0.22	4.74	21.2	14	3	58	0.95	2.60	25	50	50														
SW9-03	No access	22/12/2017																											
SW9-03	No access	2/01/2018																											
SW9-03	Very low water level, insufficient water to sample. Drizzle.	2/02/2018																											
SW9-03	Upstream and downstream sites connected. Very low flow, low water level. Drizzle.	6/03/2018		2.01	0.27	4.40	22.4	36	1	8	0.39	1.29	25	50	50														
SW9-03	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Overcast.	23/04/2018		2.43	0.24	4.77	20.3	13																					
SW9-03	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Overcast.	1/05/2018		3.85	0.23	4.98	18.3	4	7	3	0.72	1.67	25	50	50														
SW9-03	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	8/06/2018	11:58	4.57	0.22	4.69	15.6	7																					
SW9-03	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	4/07/2018	9:32	3.92	0.20	4.65	15.7	20	1	26	0.66	1.68	30	250	250														
SW9-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	27/08/2018	14:49	3.16	0.21	5.08	16.8	36																					
SW9-03	Upstream and downstream sites connected. Low flow, medium water level. Drizzle.	4/09/2018	13:35	5.23	0.43	4.35	16.0	58	3	79	0.90	2.19	30	250	250														
SW9-03	Upstream and downstream sites connected. Very low flow, low water level. Evidence of cattle disturbance. Rain.	11/10/2018	11:56	3.95	0.21	4.96	18.5	68																					

SW9-03 - Everson's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW9-03	Upstream and downstream sites connected. No visible flow, low water level. Light scum layer. Weather fine.	12/11/2018	10:56	2.39	0.18	4.77	22.4	151	1	29	1.04	1.98	30	100	50													
SW9-03	Insufficient water to sample	24/12/2018	11:21																									
SW9-03	Dry, not sampled.	22/02/2019	11:19																									
SW9-03	Dry, not sampled.	16/03/2019	8:53																									
SW9-03	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level. Overcast.	3/04/2019	11:53	2.37	1.73	4.00	22.1	35	1	7	0.43	2.29	30	100	50													
SW9-03	Insufficient water to sample.	24/05/2019	13:27																									
SW9-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	3/06/2019	13:15	2.45	0.53	4.63	17.2	23	4	3	0.67	1.94	30	230	50													
SW9-03	Upstream and downstream sites connected. Very low flow, medium water level. Drizzle.	8/07/2019	9:08	3.24	0.48	5.90	16.2	29																				
SW9-03	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	2/08/2019	11:36	0.00	0.43	4.72	15.3	6	1	5	0.69	1.93	30	100	50													
SW9-03	Dry, not sampled.	2/12/2019	12:58																									
SW9-03	Low flow, low water level. Overcast.	18/01/2020	13:48	4.23	0.84	4.28	23.2	75	2	31	0.71	2.44	470	420	50													
SW9-03	Dry, not sampled.	4/02/2020	12:10																									
SW9-03	Upstream and downstream sites connected. No visible flow, medium water level. Drizzle.	7/03/2020	14:40	0.29	0.36	5.51	24.6	6	3	4	0.78	2.15	30	220	50													
SW9-03	Upstream and downstream sites connected. No visible flow, medium water level.Overcast.	9/04/2020	7:18	1.49	0.33	5.16	20.0	22																				
SW9-03	Upstream and downstream sites connected. Low flow, low water level. Weather, fine.	7/05/2020	12:22	2.89	0.30	4.97	18.2	17	6	3	0.57	1.70	30	100	50													
SW9-03	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	1/06/2020	10:33	1.15	0.32	5.37	16.8	13																				
SW9-03	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	8/08/2020	13:23	3.36	0.26	5.84	17.4	11																				
SW9-03	Upstream and downstream sites connected. High flow, very high water level. Drizzle.	15/12/2020	9:27	3.74	0.85	5.97	23.2	25	3	11	0.12	5.60	30	100	50	0.441	0.002	0.0005	0.001	0.002	0.440	0.001	3.943	0.0003	0.037	0.001	0.0050	0.170
SW9-03	Upstream and downstream sites not connected. No visible flow, very low water level. Weather fine.	4/02/2021	9:38	0.62	0.24	5.85	23.4	5																				
SW9-03	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	3/05/2021	14:21	1.64	0.23	5.97	20.4	6	4	3	0.47	1.28	30	100	50	0.682	0.001	0.0005	0.001	0.001	1.363	0.001	0.431	0.0003	0.002	0.001	0.0005	0.011
SW9-03	Unable to determine if connected. No visable flow. Low water level. Overcast.	11/11/2021	9:59	2.26	0.27	6.17	23.4	18	5	5	0.62	1.88	30	100	50	0.606	0.001	0.0015	0.001	0.001	1.464	0.002	0.253	0.0050	0.004	0.002	0.0050	0.035
SW9-03	Likely to be connected. Very low flow, high water level. Weather fine.	17/05/2022	7:34	1.77	0.14	5.55	21.0	22	3	15	0.54	1.61	30	100	50	0.590	0.001	0.0005	0.001	0.001	1.750	0.001	0.280	0.0003	0.001	0.001	0.0005	0.009

SW9-03 - Everson's Creek

Wet Event Monitoring

[illegible]

SW9-03 - Everson's Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW9-02	No access	22/12/2017																										
SW9-02	No access	2/01/2018																										
SW9-02	No visible flow, low water level. Sampled in medium sized pool. Rain.	2/02/2018		5.09	0.26	4.67	19.1	22																				
SW9-02	Upstream and downstream sites connected. Low flow, low water level. Drizzle.	6/03/2018		2.19	0.25	4.80	22.2	60	2	11	0.86	2.55	25	50	50													
SW9-02	Unable to determine if upstream and downstream sites were connected. Very low flow, medium water level. Overcast.	23/04/2018		1.94	0.27	4.66	19.8	20																				
SW9-02	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	1/05/2018		3.11	0.23	4.73	17.8	4	9	17	0.48	1.82	25	50	50													
SW9-02	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	8/06/2018	11:50	4.18	0.23	4.95	15.0	7																				
SW9-02	Upstream and downstream sites connected. Very low flow, low water level. Overcast.	4/07/2018	9:15	2.94	0.21	4.83	15.5	34	1	22	0.57	1.65	30	250	250													
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Slight scum layer. Weather fine.	27/08/2018	14:42	3.94	0.26	4.95	16.0	40																				
SW9-02	Upstream and downstream sites connected. Low flow, medium water level. Overcast.	4/09/2018	13:26	4.21	0.45	4.68	15.0	74	1	27	0.98	2.22	30	250	250													
SW9-02	Upstream and downstream sites connected. Very low flow, medium water level. Rain.	11/10/2018	11:43	2.65	0.27	5.53	17.8	88																				
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Light scum/ bacteria layer. Tannins. Weather fine.	12/11/2018	10:44	0.84	0.20	4.44	19.8	9	1	3	0.40	1.47	30	100	50													
SW9-02	Insufficient water to sample.	24/12/2018	11:17																									
SW9-02	Dry, not sampled.	22/02/2019	11:24																									
SW9-02	Dry, not sampled.	16/03/2019	8:00																									
SW9-02	Unable to determine if upstream and downstream sites were connected. No visible flow, medium water level. Overcast.	3/04/2019	11:43	2.98	0.70	4.33	20.6	80	1	28	0.25	1.60	30	100	50													
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	24/05/2019	13:29	0.66	0.66	5.18	19.8	10																				
SW9-02	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	3/06/2019	13:04	2.45	0.50	4.88	16.8	8	2	4	0.36	1.07	30	100	50													
SW9-02	Upstream and downstream sites connected. Very low flow, medium water level. Drizzle.	8/07/2019	9:00	2.11	0.41	4.15	15.8	29																				
SW9-02	Upstream and downstream sites connected. Very low flow, low water level. Green algae. Weather fine.	2/08/2019	11:24	0.00	0.46	4.21	14.8	4	1	2	0.77	2.31	30	100	50													
SW9-02	Dry, not sampled.	2/12/2019	12:56																									
SW9-02	Dry, not sampled.	18/01/2020	14:01																									

SW9-03 - Everson's Creek

Wet Event Monitoring

[illegible]

SW10-02 - Richmond River

Dry Event Monitoring

[illegible]

SW10-02 - Richmond River

Dry Event Monitoring

[illegible]

SW10-02 - Richmond River

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C:10 - C:16 Fraction	>C:16 - C:34 Fraction	>C:34 - C:40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	16/08/2019	8:42	6.11	16.50	7.33	17.2	5																				
SW10-02	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Wave action. Overcast.	11/09/2019	10:06	6.64	30.00	7.30	17.7	94	1	76	0.19	0.29	30	100	50													
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	2/10/2019	11:39	5.26	29.20	7.21	23.4	36																				
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	6/11/2019	11:20	5.75	33.00	7.54	25.4	39	1	9	0.05	0.19	30	100	50													
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	5/12/2019	10:06	5.55	40.00	7.57	26.7	49																				
SW10-02	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	9/01/2020	8:48	5.17	42.50	7.61	28.1	4	3	4	0.09	0.26	30	100	50													
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Strong odour. Wave action. Weather fine.	17/02/2020	15:44	0.24	0.27	6.04	27.7	557																				
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	12/03/2020	8:39	4.38	0.33	6.64	24.3	52	5	22	0.19	1.13	30	100	50													
SW10-02	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Weather fine.	1/04/2020	10:55	6.11	11.90	7.30	25.2	72																				
SW10-01	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	14/05/2020	16:12	8.31	16.90	7.36	20.0	33	3	17	0.07	0.36	30	100	50													
SW10-01	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Drizzle.	8/07/2020	10:30	7.53	12.90	6.77	16.2	30																				
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	19/11/2020	11:26	5.63	23.70	7.25	26.2	14	2	19	0.04	0.38	30	100	50	0.113	0.001	0.0005	0.001	0.001	0.211	0.001	0.102	0.0003	0.001	0.001	0.0050	0.003
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Overcast.	18/05/2021	11:32	7.00	2.01	7.29	18.2	30	1	11	0.08	0.50	30	100	50	0.316	0.001	0.0005	0.001	0.001	0.747	0.001	0.066	0.0003	0.002	0.001	0.0005	0.004
SW10-01	Upstream and downstream connected. Low flow. High water level. Incoming tide. Drizzle.	24/11/2021	9:31	6.23	4.79	7.95	25.2	42	1	32	0.14	0.48	30	100	50	0.331	0.001	0.0015	0.002	0.001	0.740	0.002	0.059	0.0003	0.002	0.002	0.0015	0.001
SW10-02	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Weather fine.	18/05/2022	11:44	7.16	0.15	6.65	20.7	54	1	36	0.16	0.68	30	100	50	0.410	0.001	0.0005	0.001	0.002	1.082	0.001	0.048	0.0003	0.002	0.001	0.0005	0.006
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					22.86	7.54		74	3	45	0.17	0.71	30	100	50	0.340	0.001	0.0009	0.001	0.001	0.869	0.001	0.065	0.0003	0.002	0.001	0.0029	0.004
P20				5.63	0.44	6.86																						

SW10-02 - Richmond River

Dry Event Monitoring

[illegible]

SW10-02 - Richmond River

Dry Event Monitoring

[illegible]

SW10-02 - Richmond River

Dry Event Monitoring

[illegible]

SW10-02 - Richmond River

Dry Event Monitoring

[illegible]

SW10-02 - Richmond River

Wet Event Monitoring

[illegible]

SW10-02 - Richmond River

Wet Event Monitoring

[illegible]

SW10-02 - Richmond River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW10-02	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Wave action. Weather fine.	1/06/2020	9:38	6.67	19.70	7.09	18.8	86																				
SW10-01	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Drizzle.	10/09/2020	12:58	8.96	13.40	7.13	19.7	25																				
SW10-01	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Overcast.	9/11/2020	10:40	7.39	22.30	7.39	24.9	39	1	33	0.04	0.32	30	100	50	0.172	0.001	0.0005	0.001	0.001	0.230	0.001	0.087	0.0003	0.001	0.001	0.0050	0.003
SW10-01	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Weather fine.	4/02/2021	11:02	5.63	1.72	7.04	28.0	160																				
SW10-01	Upstream and downstream sites connected. Very low flow, medium water level. Incoming tide. Weather fine.	3/05/2021	13:29	4.93	0.33	6.56	20.6	26	6	22	0.09	0.32	30	100	50	0.784	0.001	0.0005	0.001	0.001	1.637	0.001	0.185	0.0003	0.004	0.001	0.0005	0.010
SW10-02	Upstream and downstream connected. Medium flow. High water level. Outgoing tide. Drizzle.	12/11/2021	8:59	6.31	11.30	7.39	25.1	93	1	73	0.18	0.39	30	100	50	0.218	0.001	0.0015	0.002	0.001	0.607	0.002	0.109	0.0050	0.003	0.002	0.0050	0.022
SW10-02	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Drizzle.	17/05/2022	13:40	5.02	0.19	5.93	20.4	62	1	45	0.17	0.71	30	100	50	0.558	0.001	0.0005	0.001	0.002	1.561	0.001	0.065	0.0003	0.003	0.001	0.0005	0.007
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					25.74	7.33		93	3	63	0.21	0.78	30	100	50	0.587	0.001	0.0009	0.001	0.002	1.302	0.001	0.121	0.0022	0.004	0.001	0.0050	0.017
P20				5.16	0.47	6.68																						
St Dev					12.32	0.46																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW11		31/01/2013		N/A	0.12	N/A	N/A	N/A	3	32	0.02	0.80																
SW11		1/03/2013		1.70	0.14	5.78	23.3	N/A	3	38	0.34	0.70																
SW11		28/05/2013		9.90	0.55	7.11	16.6	52	3	28	0.15	0.60																
SW11		5/07/2013		5.70	0.15	5.70	16.3	107	3	158	0.31	0.90																
SW11		30/07/2013		9.90	0.65	6.70	19.4	130	3	150	0.38	0.90																
SW11		19/11/2013		7.20	19.30	6.50	25.1	24	3	24	0.06	0.05																
SW11		25/11/2013		9.10	4.20	7.20	26.2	12	3	16	0.10	0.40																
Upstream Monitoring																												
SW10-01	Photo taken	4/08/2016		7.11	11.90	7.48	16.9	110																				
SW10-01		10/11/2016		6.10	23.00	7.05	28.1	45	2	48	0.15	0.34	25	50	50													

SW10-02 - Richmond River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW 10-01		7/12/2016		6.59	18.40	7.01	28.1	65																				
SW 10-01	High tide	3/01/2017		5.90	20.10	6.88	27.5	300	2	141	0.21	0.36	25	50	50													
SW 10-02	Incoming tide therefore SW 10-02 is upstream. Near high.	28/02/2017		5.08	27.10	7.09	25.3	38																				
SW 10-01	Low, outflowing tide. Still conditions.	16/03/2017		4.96	0.28	6.66	25.2	55	1	22	0.20	0.80	25	50	50													
SW 10-01	Debris suggests recent flooding, very high water level. U/s and d/s monitoring sites connected.	4/04/2017		2.80	0.12	6.50	19.9	41																				
SW 10-01	Low flow. Outgoing, almost low tide. U/s and d/s sites connected. Overcast.	5/05/2017		6.32	5.64	7.14	20.7	31	3	15	0.11	0.52	25	50	50													
SW 10-02	Upstream and downstream sites connected. Moderate flow. Incoming tide, therefore SW 10-02 is upstream. High water level. Drizzle.	14/06/2017		6.67	0.11	6.29	16.4	84																				
SW 10-01	Upstream and downstream sites connected. Outgoing tide, gentle flow, medium water level. Showers.	3/10/2017		5.39	25.40	7.34	22.0	26	1	20	0.09	0.34	25	50	50													
SW 10-02	Upstream and downstream sites connected. Low - medium flow. Incoming tide, therefore SW10-02 is upstream. Very high water level. Overcast.	6/11/2017		4.42	7.94	6.81	24.8	38																				
SW 10-01	Upstream and downstream sites connected. Slight flow, high water level, tide running out. Overcast.	2/12/2017		3.21	7.55	6.95	26.3	60	5	62	0.19	0.59	25	50	50													
SW 10-01	Upstream and downstream sites connected. Medium flow, very high water level. Outgoing tide. Weather fine.	4/01/2018		6.46	0.22	7.03	27.4	23																				
SW 10-02	Upstream and downstream sites connected. Medium flow, very high water level. Incoming tide. Rain.	2/02/2018		4.34	21.70	7.05	26.1	115	3	63	0.19	0.62	25	50	50													
SW 10-01	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.	8/03/2018		5.28	0.17	7.10	24.5	61																				
SW 10-01	No access - crane lifting overhead	18/04/2018																										
SW 10-02	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Weather fine.	1/05/2018		6.98	2.44	6.91	20.5	43																				
SW 10-02	Upstream and downstream sites connected. Very low flow, low water level. Incoming tide. Overcast.	8/06/2018	10:51	7.29	14.20	6.76	17.5	19	1	36	0.07	0.23	30	250	250													
SW 10-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	5/07/2018	15:08	7.54	12.50	7.23	18.1	13																				
SW 10-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	28/08/2018	11:05	7.01	26.40	7.04	17.3	30	4	16	0.04	0.22	30	250	250													
SW 10-02	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Weather fine.	4/09/2018	14:21	7.23	32.80	6.08	18.1	22																				

SW10-02 - Richmond River

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW10-02	Upstream and downstream sites connected. Medium flow, high water level. Incoming tide. Rain.	11/10/2018	10:33	5.53	20.20	6.67	22.7	64	2	27	0.05	0.16	30	100	50													
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Wave action. Weather fine.	20/11/2018	12:23	5.53	15.20	7.18	26.7	128																				
SW10-01	Upstream and downstream sites connected. Medium flow, high water level. Outgoing tide. Rain.	24/12/2018	11:57	5.58	26.10	7.07	26.5	25																				
SW10-02	Upstream and downstream sites connected. Low flow, medium water level. Incoming tide. Overcast.	24/01/2019	11:46	4.62	31.00	7.18	28.0	22	1	11	0.11	0.36	30	100	100													
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level, wave action. Incoming tide. Overcast.	22/02/2019	9:37	5.60	39.30	7.64	26.7	66	3	11	0.12	0.30	30	100	50													
SW10-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Drizzle.	16/03/2019	10:16	4.52	36.10	6.84	26.6	100																				
SW10-01	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Overcast.	3/04/2019	10:13	5.60	25.50	7.23	23.2	62	1	5	0.02	0.49	30	100	50													
SW10-01	Upstream and downstream sites connected. Low flow, high water level. Outgoing tide. Weather fine.	3/06/2019	10:51	7.29	29.00	7.32	17.6	8																				
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level, wave action. Outgoing tide. Overcast.	5/07/2019	14:26	8.58	1.36	7.12	17.2	325	4	320	0.43	1.08	30	100	50													
SW10-01	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	2/08/2019	13:19	6.16	18.60	7.25	18.4	29																				
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Weather fine.	2/12/2019	11:11	5.30	39.20	7.56	26.9	33	4	55	0.17	0.42	30	100	50													
SW10-02	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide. Overcast.	18/01/2020	14:35	6.11	37.60	7.46	26.1	21																				
SW10-01	Upstream and downstream sites connected. Low flow, medium water level. Outgoing tide. Overcast.	4/02/2020	10:49	4.60	18.00	7.55	27.5	94	1	44	0.06	0.36	30	100	50													
SW10-01	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Overcast.	29/04/2020	11:09	6.88	14.70	7.38	23.5	30																				
SW10-02	Upstream and downstream sites connected. Low flow, very low water level. Incoming tide. Wave action. Overcast.	18/05/2020	13:22	8.35	18.90	6.87	20.1	434	10	286	0.42	0.84	30	100	50													
SW10-01	Upstream and downstream sites connected. Low flow, low water level. Outgoing tide. Weather fine.	1/06/2020	9:30	7.29	19.30	6.97	18.8	41																				
SW10-02	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Drizzle.	10/09/2020	12:54	8.54	13.00	6.89	19.4	54																				
SW10-02	Upstream and downstream sites connected. Low flow, low water level. Incoming tide. Overcast.	9/11/2020	10:55	7.89	22.60	7.54	25.1	48	3	23	0.04	0.30	30	100	50	0.147	0.001	0.0005	0.001	0.001	0.256	0.001	0.113	0.0003	0.001	0.001	0.0050	0.005

SW10-02 - Richmond River

Wet Event Monitoring

[illegible]

Dry Event Monitoring

GDE07	Photo taken	10/08/2016		3.17	0.13	6.85	15.5	11																			
GDE07		9/09/2016		2.04	0.16	5.92	16.4	17	3	9	0.05	0.51	25	50	50												
GDE07		11/10/2016		2.71	0.17	6.76	19.3	3																			
GDE07		3/11/2016		0.64	0.18	6.51	20.0	4	4	5	0.05	0.66	25	50	50												
GDE07		15/12/2016		0.44	0.20	6.32	22.7	16																			
GDE07	Very low water level, stagnant pool, tannin stained.	18/01/2017		0.14	0.19	6.89	24.1	41	1	10	0.11	1.29	25	50	50												
GED07	Very low water level. Unable to obtain accurate DO and turbidity readings.	3/02/2017			0.47	7.54	27.3																				
GDE07	Low to medium water level. No observed inflow.	13/03/2017		2.06	0.22	6.55	22.6	8	1	1	0.04	0.76	25	50	50												
GDE07	No visible flow. Overcast.	26/04/2017		0.52	0.15	5.80	19.1	18																			
GDE07	Overcast. High water level.	10/05/2017		2.87	0.16	5.87	17.9	24	1	18	0.05	0.46	25	50	50												
GDE07	No visible flow. High water level. Weather fine.	28/06/2017		0.45	0.13	5.88	16.1	16																			
GDE07	No visible flow. Medium to high water level. Weather fine.	13/07/2017		1.08	0.16	5.66	14.7	14	3	8	0.04	0.42	25	50	50												
GDE07	No visible flow. Mid water level. Surface dust layer. Weather fine.	4/08/2017		0.82	0.15	4.77	12.8	4																			
GDE07	Weather fine. Low water level. Very recent bushfire.	7/09/2017		0.35	0.17	5.98	14.0	2	2	3	0.06	0.70	25	50	50												
GDE07	Water level medium to high. No inflow. Weather fine. Recent bushfire.	26/10/2017		2.00	0.24	6.43	20.2	9																			
GDE07	No inflow. Water level medium-high. Weather fine.	22/11/2017		2.48	0.19	6.07	20.9	56	4	10	0.07	0.91	25	50	50												
GDE07	No visible flow, medium water level. Weather fine.	15/12/2017		1.15	0.19	6.66	24.3	6																			
GDE07	No inflow, low water level. Weather fine.	23/01/2018		6.14	0.20	7.08	27.0	16	4	13	0.07	0.98	25	50	50												
GDE07	No visible flow, medium water level. Overcast.	14/02/2018		0.82	0.20	6.52	25.7	7																			
GDE07	No visible flow, medium water level. Weather fine.	15/03/2018		2.86	0.22	6.12	22.5	14	1	10	0.05	1.25	25	50	50												
GDE07	Very low flow, medium water level. Weather fine.	5/04/2018		4.50	0.25	6.39	24.3	8																			
GDE07	No visible flow, medium water level. Weather fine.	3/05/2018		3.26	0.25	6.17	20.1	67	2	73	0.04	2.81	30	250	250												
GDE07	No visible flow, medium water level. Dust layer on surface. Weather fine.	15/06/2018	14:26	3.64	0.23	6.03	16.4	20																			
GDE07	No visible flow, low water level. Weather fine.	17/07/2018	11:33	1.31	0.20	6.30	12.3	4	1	4	0.04	0.65	30	250	250												
GDE07	No visible flow, very low water level. Weather fine.	9/08/2018	13:47	2.61	0.20	6.75	14.3	5																			
GDE07	No visible flow, low water level. Weather fine.	24/09/2018	10:12	3.20	0.27	7.14	17.6	10	3	4	0.03	0.79	30	250	250												
GDE07	No visible flow, low water level. Weather fine.	3/10/2018	14:16	4.67	0.29	7.44	21.4	17																			
GDE07	No visible flow, low water level. Drizzle.	8/11/2018	12:35	1.84	0.22	6.64	23.5	46	1	8	0.08	0.95	30	100	50												
GDE07	No visible flow, low water level. Weather fine.	11/12/2018	10:38	1.18	0.26	6.85	24.0	7																			

Dry Event Monitoring

Baseline (pre-construction) Monitoring (identifier from pre-construction)

GDE07 - Pond / wetland

Dry Event Monitoring

[illegible]

GDE-07 - Pond / wetland

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
GDE07	Private property - no access	4/08/2016																											
GDE07		10/11/2016		0.72	0.19	6.77	25.0	12	3	7	0.06	0.80	25	50	50														
GDE07		7/12/2016		2.15	0.20	6.05	22.9	63																					
GDE07	Low water level	3/01/2017		1.89	0.18	6.91	26.6	14	2	12	0.07	1.01	25	50	50														
GDE07	Very high water level. Light rain.	28/02/2017		5.41	0.22	6.66	22.6	51																					
GDE07	Strong inflow. Very high water level.	16/03/2017		1.54	0.18	5.66	22.6	41	1	33	0.08	1.48	25	50	50														
GDE07	Very high water level, steady inflow	4/04/2017		1.87	0.16	5.61	20.6	25																					
GDE07	No visible flow, stagnant, high water level. Overcast.	5/05/2017		0.77	0.16	6.30	18.2	27	2	14	0.04	0.50	25	50	50														
GDE07	No visible flow. High water level. Overcast.	14/06/2017		1.67	0.08	5.34	16.9	45																					
GDE07	No visible flow, water level very low. Recent bushfire. Showers.	3/10/2017		3.17	0.19	7.40	17.6	12	2	11	0.23	2.37	59	50	50														
GDE07	No inflow, high water level. Weather clearing.	6/11/2017		7.76	0.26	5.71	20.8	88																					
GDE07	No inflow, high water level. Overcast.	2/12/2017		1.72	0.17	6.03	24.1	12	6	14	0.05	0.67	25	50	50														
GDE07	No visible flow, very high water level. Weather fine.	4/01/2018		4.63	0.21	6.10	26.0	24																					
GDE07	No visible inflow, low water level. Overcast.	2/02/2018		0.93	0.20	6.90	22.0	12	5	8	0.06	0.92	25	50	50														
GDE07	No visible flow, very high water level. Overcast.	8/03/2018		1.58	0.29	5.95	22.7	19																					
GDE07	High water level. Overcast	18/04/2018		2.79	0.23	6.63	21.9	5	3	1	0.04	0.61	30	250	250														
GDE07	Very high water level. Weather fine.	1/05/2018		2.81	0.29	6.14	20.2	27																					
GDE07	No visible flow, medium water level. Drizzle.	8/06/2018	9:34	1.53	0.25	5.96	15.7	17	5	44	0.06	3.84	30	250	250														
GDE07	No visible flow, high water level. Overcast.	5/07/2018	15:29	1.83	0.17	6.78	16.7	6																					
GDE07	No visible flow, low water level. Weather fine.	28/08/2018	11:37	3.75	0.22	7.86	14.9	11	1	5	0.05	0.35	30	250	250														
GDE07	No visible flow, low water level. Overcast.	4/09/2018	15:09	4.33	0.34	6.30	16.6	8																					
GDE07	No visible flow, medium water level. Rain.	11/10/2018	9:33	2.73	0.22	6.67	19.7	40	4	3	0.04	0.67	30	100	50														
GDE07	No visible flow, medium water level. Brown algae present. Weather fine.	20/11/2018	12:49	2.99	0.26	7.07	25.0	12																					
GDE07	No visible flow, very low water level. Odour. Overcast.	24/12/2018	12:20	1.80	0.29	6.99	24.8	16																					
GDE07	Insufficient water to sample.	24/01/2019	11:10																										
GDE07	Insufficient water to sample.	22/02/2019	9:00																										
GDE07	Insufficient water to sample.	16/03/2019	9:57																										
GDE07	No visible flow, high water level. Overcast.	3/04/2019	10:51	5.14	0.45	6.49	20.5	93	1	26	0.06	2.76	30	230	50														
GDE07	No visible flow, medium water level. Weather fine.	3/06/2019	11:21	4.00	0.37	7.11	14.8	18																					
GDE07	No visible flow, medium water level. Weather fine.	3/06/2019	11:21	4.00	0.37	7.11	14.8	18																					

Wet Event Monitoring

P80 & P20 Values (calculated from baseline and upstream data below)

GDE-07 - Pond / wetland

Wet Event Monitoring

[illegible]

SW10-04 - Unnamed tributary of Bingal Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Downstream Monitoring																												
SW 10-04	Water too shallow to take readings in waterway. Readings taken from sample collected in jug. DO reading not possible. Photo taken.	10/08/2016			0.66	7.03	16.1	66																				
SW 10-04		9/09/2016		1.74	0.96	6.23	15.1	89	1	32	0.35	0.46	25	50	50													
SW 10-04	Significant drain augmentation works have been undertaken	12/10/2016		6.93	0.92	6.91	21.4	146																				
SW 10-04		3/11/2016		7.15	0.99	6.93	22.8	129	6	10	0.11	0.66	25	50	50													
SW 10-04	Adjacent sediment basin was discharging into waterway	15/12/2016		6.17	0.56	6.52	24.4	162																				
SW 10-04	No flow, low water level.	18/01/2017		5.93	1.01	7.32	28.4	109	3	24	0.17	0.66	25	50	50													
SW 10-04	Green stain due to high algae concentration. Medium water level. No observed flow.	3/02/2017		9.53	1.04	9.51	29.8	150																				
SW 10-04	Low to medium water level. Upstream and downstream sites connected.	13/03/2017		6.05	0.83	6.96	25.6	32	2	9	0.05	0.67	25	50	50													
SW 10-04	No visible flow. U/s and d/s sites connected. Overcast.	26/04/2017		6.05	0.69	6.41	20.4	65																				
SW 10-04	Light rain. U/s and d/s connected. No observed flow. Medium water level. Dirty water discharging from adjacent quarry sediment basin.	10/05/2017		2.74	0.50	6.27	18.5	108	1	94	0.37	0.81	25	50	50													
SW 10-04	Upstream and downstream sites connected. Low flow. Medium water level. Sediment laden water from quarry basin entering waterway. Weather fine.	28/06/2017		6.83	0.58	6.18	18.3	17																				
SW 10-04	Upstream and downstream sites connected. No observed flow. Medium water level. Weather fine.	13/07/2017		8.65	0.75	6.27	17.8	66	2	10	0.11	0.32	25	50	50													
SW 10-04	Upstream and downstream sites connected. No visible flow. Mid water level. Weather fine.	4/08/2017		8.32	0.87	6.28	14.7	19																				
SW 10-04	Weather fine. U/S and D/S sites connected. No observed flow. Medium water level.	7/09/2017		9.10	1.00	6.96	17.3	14	2	10	0.09	0.56	25	50	50													
SW 10-04	U/S and D/s connected. No observed flow. Weather fine. Water level high	26/10/2017		8.53	0.64	6.74	22.3	19																				
SW 10-04	No access due to safety issues.	22/11/2017																										
SW 10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	15/12/2017		8.02	0.60	6.80	27.7	18																				
SW 10-04	Upstream and downstream sites connected. No visible flow, low water level. Reddish-brown colour to water. Weather fine.	23/01/2018		8.11	0.55	6.98	30.2	69	1	29	0.37	1.36	25	50	50													
SW 10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	14/02/2018		5.77	0.83	6.64	26.9	34																				
SW 10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	15/03/2018		4.89	0.56	6.36	25.3	31	1	20	0.16	0.57	25	50	50													

SW10-04 - Unnamed tributary of Bingal Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW 10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/04/2018		2.45	0.73	6.71	24.6	60																				
SW 10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/05/2018		1.53	0.44	6.44	19.9	88	3	63	0.33	0.73	30	250	250													
SW 10-04	Upstream and downstream sites connected. No visible flow, medium water level. Slight layer of red algae present. Weather fine.	15/06/2018	14:37	1.88	0.64	6.22	17.3	39																				
SW 10-04	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/07/2018	11:50	3.57	0.71	6.37	12.6	15	1	9	0.22	0.23	30	250	250													
SW 10-04	Upstream and downstream sites connected. No visible flow, low water level. Brown algae present. Weather fine.	9/08/2018	13:57	5.21	0.83	6.60	16.0	28																				
SW 10-04	Upstream and downstream sites connected. No visible flow, low water level. Slight dust layer present. Weather fine.	24/09/2018	10:26	1.31	0.73	6.59	18.0	31	1	6	0.09	0.35	30	250	250													
SW 10-04	Upstream and downstream sites connected. No visible flow, medium water level. Green/brown algae present with a surface dust layer. Weather fine.	3/10/2018	14:28	3.15	0.77	6.83	19.8	54																				
SW 10-04	No visible flow, medium water level. Dust layer present. Drizzle.	8/11/2018	12:49	4.66	0.89	6.64	23.4	68	1	18	0.19	0.96	30	100	50													
SW 10-04	Upstream and downstream sites connected. Very low flow, low water level. Algae present. Weather fine.	11/12/2018	10:22	4.23	1.08	7.15	25.3	13																				
SW 10-04	Very low flow, low water level. Algae present. Weather fine.	15/01/2019	10:08	2.61	0.96	7.15	25.5	10	1	11	0.21	0.75	30	100	100													
SW 10-04	No visible flow, low water level. Green algae present. Weather fine.	13/02/2019	13:30	12.50	0.70	7.66	31.7	97																				
SW 10-04	No visible flow, medium water level. Overcast.	14/03/2019	16:14	3.70	0.99	7.32	28.1	68	1	9	0.12	0.73	30	100	50													
SW 10-04	No visible flow, medium water level. Slight odour. Drizzle.	11/04/2019	13:32	8.17	0.69	6.87	22.7	146																				
SW 10-04	Connected. Very low flow. Medium water level. Fine	6/05/2019	14:58	5.67	0.84	6.99	21.1	21	1	4	0.04	0.50	30	100	50													
SW 10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	5/06/2019	14:59	6.14	0.70	7.00	15.8	35																				
SW 10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	9/07/2019	16:37	4.04	0.43	6.43	17.0	59	1	8	0.21	1.27	30	100	50													
SW 10-04	Upstream and downstream sites connected. No visible flow, medium water level. Brown and green algae, slight surface bacteria. Weather fine.	16/08/2019	9:31	4.07	0.96	6.69	14.1	3																				
SW 10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	11/09/2019	10:53	2.85	0.71	6.64	15.1	6	1	7	0.05	0.49	30	100	50													
SW 10-04	Upstream and downstream sites connected. No visible flow, low water level. Green algae. Weather fine.	2/10/2019	12:21	6.27	0.91	6.59	20.4	10																				

SW10-04 - Unnamed tributary of Bingal Creek

Dry Event Monitoring

[illegible]

SW10-04 - Unnamed tributary of Bingal Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW12		23/09/2013		8.90	0.19	7.30	29.1	147	3	42	0.07	0.60																
SW12		28/10/2013		9.30	0.24	7.20	25.2	130	3	64	0.02	1.00																
SW12		16/12/2013		8.70	0.38	7.10	32.7	63	3	33	0.06	0.80																
Upstream Monitoring																												
SW10-03	Photo taken	10/08/2016		0.95	1.13	7.17	14.9	0																				
SW10-03		9/09/2016		2.12	2.02	6.34	16.1	84	2	57	1.40	0.70	25	50	50													
SW10-03	Significant drain works have been undertaken	12/10/2016		7.05	0.97	7.04	26.5	966																				
SW10-03		3/11/2016		7.85	0.99	6.99	24.3	113	1	11	0.10	0.60	25	50	50													
SW10-03		15/12/2016		5.69	0.64	6.55	26.4	149																				
SW10-03	Low water level, no flow. Turbidity data error.	18/01/2017		5.46	1.03	7.23	27.9		1	50	0.22	0.91	25	50	50													
SW10-03	Green stain due to high algae concentration. Algae scum layer. Medium water level. No observed flow.	3/02/2017		9.71	1.06	9.51	34.6	275																				
SW10-03	Low to medium water level. Upstream and downstream sites connected.	13/03/2017		7.00	1.01	6.93	25.5	89	1	16	0.06	0.74	25	50	50													
SW10-03	No visible flow. U/s and d/s sites connected. Overcast.	26/04/2017		5.18	0.78	6.26	20.8	54																				
SW10-03	Light rain. U/s and d/s connected. No observed flow. Medium water level.	10/05/2017		2.11	1.34	6.36	18.5	55	1	15	0.20	0.37	25	50	50													
SW10-03	Upstream and downstream sites connected. Low water level moderate flow. Weather fine.	28/06/2017		6.34	0.68	6.32	17.8	13																				
SW10-03	Upstream and downstream sites connected. No observed flow. Medium water level. Weather fine.	13/07/2017		9.40	0.91	6.22	17.7	35	2	23	0.24	0.46	25	50	50													
SW10-03	Upstream and downstream sites connected. No visible flow. Mid water level. Weather fine.	4/08/2017		6.98	0.98	6.24	15.2	16																				
SW10-03	No construction observed. Weather fine. U/S and D/S sites connected. No observed flow. Medium water level.	7/09/2017		9.87	1.00	7.03	16.9	25	1	12	0.14	0.62	25	50	50													
SW10-03	U/S and D/s connected. No observed flow. Weather fine. Water level high	26/10/2017		7.39	0.83	6.59	24.9	29																				
SW10-03	No access due to safety issues	22/11/2017																										
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	15/12/2017		7.83	0.68	6.93	33.2	48																				
SW10-03	Insufficient water to sample. Weather fine.	23/01/2018																										
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	14/02/2018		5.32	0.90	6.52	27.3	36																				
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	15/03/2018		5.47	0.81	6.38	24.7	92	2	23	0.12	0.49	25	50	50													

SW10-04 - Unnamed tributary of Bingal Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW 10-03	Upstream and downstream sites connected. No visible flow, medium water level. Bubbles and brown algae present. Weather fine.	5/04/2018		5.66	1.09	6.53	28.4	70																				
SW 10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	3/05/2018		3.83	0.65	6.55	22.4	49	4	13	0.17	0.29	30	250	250													
SW 10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	15/06/2018	14:42	2.78	1.07	6.22	16.2	27																				
SW 10-03	Upstream and downstream sites connected. No visible flow, low water level. Weather fine.	17/07/2018	12:09	4.49	1.07	6.51	13.1	17	1	21	0.27	0.07	30	250	250													
SW 10-03	Upstream and downstream sites connected. No visible flow, low water level. Brown algae present. Weather fine.	9/08/2018	14:05	9.53	1.16	6.55	15.9	50																				
SW 10-03	Insufficient water to sample upstream of works area.	24/09/2018	10:35																									
SW 10-03	Insufficient water to sample upstream of works area.	3/10/2018	14:34																									
SW 10-03	Insufficient water to monitor upstream of works area.	8/11/2018	12:58																									
SW 10-03	Insufficient water to sample.	11/12/2018	10:16																									
SW 10-03	Dry, not sampled.	15/01/2019	10:09																									
SW 10-03	Dry, not sampled.	13/02/2019	13:15																									
SW 10-03	Dry, not sampled.	14/03/2019	15:58																									
SW 10-03	Insufficient water to sample.	11/04/2019	13:35																									
SW 10-03	Connected. Very low flow. Medium water level. Fine.	6/05/2019	14:50	7.82	0.82	7.00	18.7	36	1	15	0.22	0.53	30	100	50													
SW 10-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	5/06/2019	15:04	6.73	1.05	6.57	14.9	15																				
SW 10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	9/07/2019	16:31	5.14	0.56	6.43	15.5	50	1	13	0.18	0.70	30	100	50													
SW 10-03	Upstream and downstream sites connected. No visible flow, very low water level. Brown and green algae. Weather fine.	16/08/2019	9:24	4.90	1.15	6.45	13.2	4																				
SW 10-03	Upstream and downstream sites connected. No visible flow, low water level. Brown algae. Weather fine.	11/09/2019	11:02	6.31	1.20	6.49	16.6	7	2	18	0.12	0.37	30	100	50													
SW 10-03	Insufficient water to monitor	2/10/2019	12:23																									
SW 10-03	Insufficient water to sample. Sample obstructed by macrophytes.	6/11/2019	12:45																									
SW 10-03	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	5/12/2019	9:20	2.26	0.84	6.60	20.7	19																				
SW 10-03	Insufficient water to sample.	9/01/2020	8:17																									
SW 10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	17/02/2020	16:28	0.00	0.56	6.21	26.9	12																				

SW10-04 - Unnamed tributary of Bingal Creek

Dry Event Monitoring

[illegible]

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

[illegible]

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

[illegible]

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	28/08/2018	11:54	7.03	0.91	7.22	15.6	11	2	8	0.04	0.34	30	250	250													
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	4/09/2018	14:53	4.62	0.94	6.29	15.3	391																				
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	7/09/2018	10:36	0.10	0.91	5.80	20.0	68	3	52	0.22	0.77	30	250	250													
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Rain.	11/10/2018	9:54	1.85	0.63	6.34	19.7	455	3	184	0.31	2.11	30	100	50													
SW10-04	Upstream and downstream sites connected. Low flow, very high water level. Drizzle.	15/10/2018	9:55	0.75	0.24	6.70	18.3	204																				
SW10-04	No visible flow, medium water level. Brownish red stain to water. Algae present. Weather fine.	20/11/2018	13:03	5.47	0.95	6.72	25.7	84																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	22/11/2018	12:21	4.51	0.91	6.95	24.1	33	1	9	0.14	0.62	30	100	50													
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Small amount of brown algae present. Overcast.	24/12/2018	12:33	0.00	0.83	6.74	25.8	249																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Turbidity exceeded measuring range of probe. Overcast.	24/01/2019	10:29	0.60	0.39	5.99	24.6	>800	1	740	1.81	2.25	30	100	100													
SW10-04	No visible flow, medium water level. Overcast.	22/02/2019	10:13	4.28	0.94	7.68	24.6	85	1	28	0.16	0.79	30	100	50													
SW10-04	No visible flow, medium water level. Overcast.	25/02/2019	17:05	9.92	0.94	7.58	26.6	134																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Rain. Turbidity exceeded maximum measuring range of probe.	16/03/2019	9:39	5.49	0.21	6.43	21.9	>800																				
SW10-04	No visible flow, medium water level. Weather, fine.	18/03/2019	16:01	4.83	0.47	6.89	25.1	324	2	123	0.17	2.39	30	100	50													
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	3/04/2019	9:47	2.99	0.37	6.43	20.2	399	2	176	0.28	2.83	30	100	50													
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	17/04/2019	15:29	8.02	1.02	6.86	22.6	28																				
SW10-04	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	3/06/2019	11:35	4.75	0.56	6.99	16.0	92																				
SW10-04	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	17/06/2019	9:22	4.22	0.84	6.42	16.8	11	3	5	0.04	0.47	30	100	50													
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/07/2019	14:56	5.52	0.40	6.58	16.7	133																				
SW10-04	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	8/07/2019	14:48	5.59	0.32	6.49	17.0	66	5	40	0.29	1.52	30	100	50													
SW10-04	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	2/08/2019	14:05	7.55	0.80	6.73	18.2	22																				

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

[illegible]

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

[illegible]

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

[illegible]

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Weather fine.	7/09/2018	10:50	1.55	1.57	6.01	17.5	84	1	47	0.18	1.36	30	250	250													
SW10-03	Upstream and downstream sites connected. Very low flow, high water level. Rain.	11/10/2018	10:08	3.75	0.84	6.39	18.5	406	2	153	0.27	1.07	30	100	50													
SW10-03	Upstream and downstream sites connected. Very low flow, very high water level. Drizzle.	15/10/2018	10:05	0.00	0.36	6.49	18.1	103																				
SW10-03	Dry upstream of works area, not sampled.	20/11/2018	13:08																									
SW10-03	Upstream and downstream sites connected. Very low flow, very low water level. Drizzle.	22/11/2018	12:08	3.32	0.81	6.89	23.6	54	2	24	0.43	0.70	30	100	50													
SW10-03	Upstream and downstream sites connected. No visible flow, very low water level. Bacteria layer present, odour, heavy aquatic vegetation. Overcast.	24/12/2018	12:39	0.14	1.07	6.65	26.3	278																				
SW10-03	Insufficient water to sample.	24/01/2019	10:56																									
SW10-03	Dry, not sampled.	22/02/2019	10:04																									
SW10-03	Insufficient water to monitor.	25/02/2019	17:05																									
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Rain.	16/03/2019	9:46	2.64	1.54	5.35	21.9	192																				
SW10-03	Insufficient water to sample.	18/03/2019	16:04																									
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	3/04/2019	9:39	4.65	0.63	5.98	20.0	443	2	231	0.21	0.91	30	100	50													
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Heavy aquatic vegetation. Overcast.	17/04/2019	15:25	6.64	0.72	7.09	23.5	56																				
SW10-03	Upstream and downstream sites connected. Very low flow, low water level. Weather fine.	3/06/2019	11:41	5.07	1.01	6.47	15.4	38																				
SW10-03	Upstream and downstream sites connected. No visible flow, high water level. Weather fine.	17/06/2019	9:05	5.81	0.64	6.38	15.6	29	2	15	0.19	0.77	30	100	50													
SW10-03	Upstream and downstream sites connected. No visible flow, medium water level. Overcast.	5/07/2019	14:51	6.55	0.35	6.65	16.8	105																				
SW10-03	Upstream and downstream sites connected. No visible flow, low water level. Overcast.	8/07/2019	14:52	5.75	0.41	6.56	16.3	69	3	31	0.34	1.11	30	100	50													
SW10-03	Upstream and downstream sites connected. Very low flow, medium water level. Weather fine.	2/08/2019	14:01	7.08	1.57	6.21	15.9	2																				
SW10-03	Upstream and downstream sites connected. No visible flow, very low water level. Weather fine.	2/12/2019	10:22	0.00	0.51	6.49	25.2	523	5	193	0.54	1.40	30	100	50													
SW10-03	Upstream and downstream sites connected. No visible flow, very low water level. Surface bacteria layer. Weather fine.	27/12/2019	13:56	5.81	0.93	6.90	26.5	12																				
SW10-03	Upstream and downstream sites connected. Very low flow, high water level. Overcast.	18/01/2020	15:16	4.51	0.55	5.84	23.4	421																				

SW10-04 - Unnamed tributary of Bingal Creek

Wet Event Monitoring

[illegible]

SW10-06 - Saltwater Creek

Dry Event Monitoring

[illegible]

SW10-06 - Saltwater Creek

Dry Event Monitoring

[illegible]

Dry Event Monitoring

Dry Event Monitoring

[illegible]

SW10-06 - Saltwater Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW13		4/04/2013		3.97	0.60	4.10	21.5	11	3	10	0.03	0.40																	
SW13		30/04/2013		0.80	0.17	9.20	21.5	33	3	19	0.16	0.50																	
SW13		27/08/2013		7.50	0.20	6.00	26.5	23	3	10	0.06	0.60																	
SW13		23/09/2013		7.50	0.18	6.50	29.1	19	3	17	0.04	0.50																	
SW13		28/10/2013		16.40	0.20	5.90	22.9	30	6	44	0.13	0.90																	
SW13		16/12/2013		8.20	0.18	6.00	29.6	43	3	218	2.02	2.60																	
Upstream Monitoring																													
SW10-05	Dry	10/08/2016																											
SW10-05	Dry	12/09/2016																											
SW10-05	Dry	10/10/2016																											
SW10-05	Dry	2/11/2016																											
SW10-05	Dry	15/12/2016																											
SW10-05	Dry	18/01/2017																											
SW10-05	Dry	3/02/2017																											
SW10-05	Dry	13/03/2017																											
SW10-05	Dry	26/04/2017																											
SW10-05	Sample location moved 200m north-east. Unable to confirm u/s and d/s connection. Fine weather. Very slight flow. Low water level. Milky colour.	11/05/2017		3.85	0.24	5.81	18.3	29	1	5	0.07	0.33	25	50	50														
SW10-05	Upstream and downstream sites appear likely to be connected, but cannot access to confirm. Moderate flow, medium water level. Weather fine.	28/06/2017		6.59	0.24	6.54	17.5	30																					
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Weather fine.	13/07/2017		5.08	0.27	5.85	15.1	15	2	4	0.03	0.14	25	50	50														
SW10-05	No connection between upstream and downstream sites. Stagnant pool with no visible flow. Low water level. Weather fine.	4/08/2017		2.78	0.32	5.77	14.4	2																					
SW10-05	Weather fine. U/S and D/S sites not connected. Dry.	7/09/2017																											
SW10-05	U/S and D/s connection unclear. gentle flow. Weather fine. Water level medium.	26/10/2017		5.99	0.25	7.08	19.7	10																					
SW10-05	Unable to determine connection. Medium flow, medium water level. Weather fine.	22/11/2017		8.04	0.16	6.97	19.5	15	2	5	0.06	0.39	25	50	50														

SW10-06 - Saltwater Creek

Dry Event Monitoring

[illegible]

SW10-06 - Saltwater Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, very low water level. Overcast.	11/04/2019	14:05	3.35	0.34	6.73	20.3	16																				
SW10-05	Unable to determine if connected. Very low flow. Low water level. Fine.	6/05/2019	16:45	5.97	0.26	7.16	17.7	23	1	5	0.01	0.21	30	100	50													
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine.	5/06/2019	15:59	5.86	0.24	7.10	14.2	16																				
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather, fine.	9/07/2019	17:44	8.90	0.16	6.74	15.6	37	1	7	0.05	0.47	30	100	50													
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, low water level. Weather fine.	16/08/2019	10:40	3.45	0.29	6.86	14.7	4																				
SW10-05	Dry, not sampled.	11/09/2019	12:13																									
SW10-05	Dry, not sampled.	2/10/2019	14:00																									
SW10-05	Dry, not sampled.	6/11/2019	13:31																									
SW10-05	Dry, not sampled.	5/12/2019	8:47																									
SW10-05	Dry, not sampled.	9/01/2020	7:32																									
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, high water level. Weather fine.	17/02/2020	16:53	6.10	0.17	6.49	25.0	14																				
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	12/03/2020	10:24	0.29	0.21	6.45	22.6	3	4	3	0.07	0.45	30	100	50													
SW10-05	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather fine.	1/04/2020	9:18	5.66	0.19	6.82	21.1	32																				
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	20/05/2020	8:23	9.94	0.16	7.13	16.9	35	4	16	0.07	0.56	30	100	50													
SW10-05	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	8/07/2020	11:47	7.16	0.19	6.81	13.7	25																				
SW10-05	Dry, not sampled.	19/11/2020																										
SW10-05	Unable to determine if upstream and downstream sites were connected. No visible flow, low water level.	18/05/2021	9:49	8.17	0.22	6.68	14.7	12	3	5	0.04	0.21	30	100	50	0.140	0.001	0.0005	0.001	0.001	0.603	0.001	0.024	0.0003	0.001	0.001	0.0005	0.004
SW10-05	Unable to determine if upstream and down stream connected. Medium flow. Medium water level. Overcast.	24/11/2021	10:58	9.41	0.20	7.51	21.4	15	1	1	0.05	0.31	30	100	50	0.158	0.002	0.0015	0.002	0.002	1.239	0.002	0.015	0.0003	0.001	0.002	0.0015	0.011
SW10-05	Likely to be connected. High flow, medium water level. Overcast.	18/05/2022	12:59	7.91	0.15	6.63	19.6	19	3	8	0.05	0.51	30	100	50	0.195	0.001	0.0005	0.001	0.001	1.098	0.001	0.036	0.0003	0.001	0.001	0.0005	0.006

SW10-06 - Saltwater Creek

Wet Event Monitoring

[illegible]

SW10-06 - Saltwater Creek

Wet Event Monitoring

[illegible]

Wet Event Monitoring

[illegible]

SW10-06 - Saltwater Creek

Wet Event Monitoring

[illegible]

SW10-06 - Saltwater Creek

Wet Event Monitoring

[illegible]

SW10-06 - Saltwater Creek

Wet Event Monitoring

[illegible]

SW10-08 - Randles Creek

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW 10-08	Photo taken.	10/08/2016		6.67	0.14	7.51	14.1	13																					
SW 10-08		12/09/2016		6.01	0.14	6.94	16.8	19	4	12	0.11	0.22	25	50	50														
SW 10-08		11/10/2016		1.34	0.17	6.48	18.1	14																					
SW 10-08		2/11/2016		0.66	0.19	7.06	21.0	21	6	15	0.12	0.45	25	50	50														
SW 10-08		15/12/2016		0.59	0.17	6.28	22.0	10																					
SW 10-08	Low water level, no visible flow.	18/01/2017		0.67	0.20	6.63	25.0	7	2	11	0.17	0.36	25	50	50														
SW 10-08	Dry	3/02/2017																											
SW 10-08	Dry	13/03/2017																											
SW 10-08	Medium flow, u/s and d/s sites connected. Overcast.	26/04/2017		4.99	0.13	6.37	18.6	24																					
SW 10-08	Fine weather. U/s and d/s connected. Moderate flow. Moderate water level.	11/05/2017		5.62	0.14	6.32	16.9	30	1	9	0.05	0.14	25	50	50														
SW 10-08	Upstream and downstream sites connected. Moderate flow, medium water level. Weather fine.	28/06/2017		8.34	0.13	6.44	16.0	26																					
SW 10-08	Upstream and downstream sites connected. Medium flow. Medium water level. Weather fine.	14/07/2017		8.30	0.15	6.31	13.5	26	7	18	0.05	0.20	25	50	50														
SW 10-08	Upstream and downstream sites connected. Low flow. Low water level. Weather fine.	4/08/2017		5.38	0.17	6.11	13.6	25																					
SW 10-08	Weather fine. Low flow and low water level. Unable to determine if upstream and downstream sites are connected.	7/09/2017		2.29	0.19	6.55	14.2	24	3	15	0.10	0.34	25	50	50														
SW 10-08	U/S and D/s connected. Gentle flow. Weather fine. Water level medium.	26/10/2017		3.41	0.14	6.58	19.3	16																					
SW 10-08	Unable to determine connection. Medium flow, medium water level. Weather, fine.	22/11/2017		4.12	0.13	6.53	19.7	30	2	30	0.07	0.29	25	50	50														
SW 10-08	Unable to determine if upstream and downstream sites connected. Main waterbody near dry, creek appears to be blocked/diverted. Water flowing over access track approx. 20 m west of normal sample point, sample taken from this area. Photos taken.	15/12/2017		1.70	0.16	6.43	26.0	58																					
SW 10-08	Upstream and downstream sites connected. Low flow, low water level. Weather fine.	23/01/2018		0.54	0.16	6.50	24.1	14	2	26	0.09	0.39	25	50	50														
SW 10-08	Upstream and downstream sites not connected. Low flow, very low water level. Overcast.	14/02/2018		1.71	0.15	6.62	24.5	13																					
SW 10-08	Upstream and downstream sites connected. High flow, high water level. Weather fine.	15/03/2018		4.40	0.12	6.54	20.9	10	1	7	0.05	0.27	25	50	50														
SW 10-08	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	5/04/2018		5.03	0.12	6.86	23.8	29																					
SW 10-08	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	3/05/2018		7.14	0.11	6.72	18.2	17	2	9	0.05	0.24	30	250	250														

SW10-08 - Randles Creek

Dry Event Monitoring

[illegible]

SW10-08 - Randles Creek

Dry Event Monitoring

[illegible]

SW10-08 - Randles Creek

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

SW10-08 - Randles Creek

Dry Event Monitoring

[illegible]

SW10-08 - Randles Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
Downstream Monitoring																													
SW10-08	Photo taken	4/08/2016		8.38	0.15	8.07	14.5	43																					
SW10-08		10/11/2016		2.09	0.18	6.43	22.3	11	4	9	0.08	0.46	25	50	50														
SW10-08		7/12/2016		3.77	0.13	6.11	23.3	23																					
SW10-08		3/01/2017		2.32	0.19	6.32	23.2	13	3	7	0.07	0.46	25	50	50														
SW10-08		28/02/2017		4.29	0.18	5.76	21.5	33																					
SW10-08	Very high water level. Steady flow. Upstream and downstream sites connected.	16/03/2017		5.90	0.12	5.99	22.2	20	3	8	0.04	0.46	25	50	50														
SW10-08	No access - house demolition exclusion zone fencing	4/04/2017																											
SW10-08	Moderate flow, moderate water level. U/s and d/s sites connected. Weather cloudy	5/05/2017		6.38	0.12	6.40	17.7	39	1	16	0.05	0.24	25	50	50														
SW10-08	Upstream and downstream sites connected. Moderate flow. Moderate water level. Overcast.	14/06/2017		8.64	0.12	6.08	17.3	35																					
SW10-08	Upstream and downstream connected. Steady flow, medium - high water level. Drizzle.	3/10/2017		3.99	0.19	6.64	17.4	29	1	15	0.09	0.45	25	50	50														
SW10-08	Unable to determine if upstream and downstream sites were connected. High flow, high water level. Overcast.	6/11/2017		6.17	0.11	6.53	19.4	33																					
SW10-08	Upstream and downstream sites not connected. Medium low, low water level. Overcast.	2/12/2017		2.87	0.11	6.51	23.0	7	3	12	0.07	0.29	25	50	50														
SW10-08	Upstream and downstream sites connected. Medium flow, medium water level. Weather fine.	4/01/2018		5.58	0.12	6.53	24.5	16																					
SW10-08	Upstream and downstream sites connected. High flow, medium water level. Overcast.	2/02/2018		5.48	0.15	6.43	20.7	22	2	12	0.06	0.29	25	50	50														
SW10-08	Upstream and downstream sites connected. High flow, high water level. Weather fine.	8/03/2018		6.40	0.12	6.49	21.2	20																					
SW10-08	Upstream and downstream sites connected. High flow, High water level. Overcast.	18/04/2018		6.49	0.12	6.75	20.5	52	1	27	0.08	0.32	30	250	250														
SW10-08	Upstream and downstream sites connected. High flow, high water level. Overcast.	1/05/2018		7.42	0.11	6.56	18.4	24																					
SW10-08	Upstream and downstream sites were connected. High flow, medium water level. Overcast.	8/06/2018	8:12	8.27	0.10	7.03	14.9	35	2	15	0.06	0.29	30	250	250														
SW10-08	Upstream and downstream sites connected. High flow, high water level. Overcast.	5/07/2018	16:23	7.75	0.10	6.58	17.0	46																					
SW10-08	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	28/08/2018	13:37	7.81	0.12	7.09	14.4	40	2	10	0.06	0.22	30	250	250														
SW10-08	Upstream and downstream sites connected. High flow, high water level. Overcast.	5/09/2018	6:56	8.98	0.17	6.09	14.1	68																					
SW10-08	Upstream and downstream sites connected. High flow, high water level. Rain.	11/10/2018	8:39	7.53	0.10	6.93	18.0	120	5	53	0.08	0.53	30	100	50														

SW10-08 - Randles Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
Monitoring Location	Field Notes	Date	Time	Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
				mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW10-08	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	20/11/2018	13:57	5.36	0.12	6.97	21.3	18																				
SW10-08	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	24/12/2018	13:46	3.40	0.15	6.67	22.2	22																				
SW10-08	Dry, not sampled.	24/01/2019	12:52																									
SW10-08	Insufficient water to monitor.	22/02/2019	8:43																									
SW10-08	Insufficient water to monitor.	16/03/2019	11:02																									
SW10-08	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	3/04/2019	8:40	5.01	0.18	6.58	19.9	26	5	6	0.03	0.41	30	100	50													
SW10-08	Unable to determine if upstream and downstream sites were connected. High flow, medium water level. Weather fine.	3/06/2019	10:01	5.61	0.14	6.43	14.8	17																				
SW10-08	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	5/07/2019	15:43	7.85	0.12	6.68	16.4	42	2	149	0.04	0.32	30	100	50													
SW10-08	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	2/08/2019	14:49	5.65	0.12	6.12	15.7	8																				
SW10-08	Dry, not sampled.	2/12/2019	10:32																									
SW10-08	Upstream and downstream sites not connected. Low flow, low water level. Drizzle.	18/01/2020	16:00	5.84	0.12	6.46	24.4	70																				
SW10-08	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	4/02/2020	9:23	0.58	0.18	6.47	24.0	104	2	46	0.12	1.28	30	320	50													
SW10-08	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Overcast.	29/04/2020	9:56	3.98	0.15	6.05	19.3	14																				
SW10-08	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	18/05/2020	14:49	6.83	0.13	6.07	17.8	33	4	11	0.05	0.33	30	100	50													
SW10-08	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	1/06/2020	8:26	4.04	0.15	6.04	16.3	11																				
SW10-08	Upstream and downstream sites connected. High flow, medium water level. Drizzle.	10/09/2020	11:37	7.71	0.13	5.61	16.5	58																				
SW10-08	Unable to determine if upstream and downstream sites were connected. Very low flow, low water level. Overcast.	9/11/2020	12:47	2.65	0.18	6.25	19.2	15	1	5	0.07	0.34	30	100	50	0.149	0.001	0.0005	0.001	0.001	1.222	0.001	0.033	0.0003	0.001	0.001	0.0050	0.001
SW10-08	Unable to determine if upstream and downstream sites were connected. Medium flow, medium water level. Weather fine.	4/02/2021	12:46	3.26	0.12	6.63	22.6	14																				
SW10-08	Upstream and downstream sites connected. High flow, medium water level. Drizzle.	3/05/2021	11:27	7.43	0.14	6.54	18.4	17	3	5	0.04	0.12	30	100	50	0.162	0.001	0.0005	0.001	0.001	1.468	0.001	0.044	0.0003	0.001	0.001	0.0005	0.005
SW10-08	Upstream and downstream connected. Low flow. Medium water level. Drizzle	12/11/2021	10:51	5.41	0.15	6.79	22.4	19	1	5	0.05	0.32	30	100	50	0.091	0.000	0.0015	0.002	0.002	1.034	0.002	0.055	0.0050	0.001	0.001	0.0050	0.018

SW10-08 - Randles Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW10-08	Unable to determine if connected. Medium flow, high water level. Drizzle.	17/05/2022	12:50	5.60	0.14	5.58	20.4	20	1	12	0.04	0.37	30	100	50	0.277	0.001	0.0005	0.001	0.001	1.343	0.001	0.046	0.0003	0.001	0.001	0.0005	0.009
P80 & P20 Values (calculated from baseline and upstream data below)																												
P80					0.16	6.78		40	3	27	0.08	0.50	30	160	74	0.218	0.001	0.0009	0.001	0.001	1.287	0.001	0.040	0.0022	0.001	0.001	0.0050	0.012
P20				4.46	0.12	6.00																						
St Dev					0.06	0.51																						
Threshold				0.50				10	2	10	0.02	0.20																
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
SW14		1/02/2013		N/A	0.13	N/A	N/A	N/A	3	3	0.01	0.30																
SW14		1/03/2013		6.49	0.12	5.21	23.3	N/A	3	134	0.09	1.00																
SW14		28/05/2013		8.70	0.16	5.70	15.3	23	3	13	0.05	0.30																
SW14		5/07/2013		7.70	0.14	6.10	17.7	23	3	10	0.08	0.20																
SW14		30/07/2013		8.70	0.16	6.50	18.2	17	3	10	0.01	0.05																
SW14		19/11/2013		5.50	0.18	6.80	23.0	20	3	6	0.03	0.40																
SW14		25/11/2013		6.00	0.16	7.00	24.7	14	3	27	0.08	0.70																
Upstream Monitoring																												
SW10-07	Photo taken	4/08/2016		8.54	0.13	7.64	14.4	45																				
SW10-07		10/11/2016		2.19	0.18	6.37	22.9	116	1	8	0.07	0.54	25	50	50													
SW10-07		7/12/2016		4.46	0.13	6.22	23.4	23																				
SW10-07		3/01/2017		3.06	0.18	6.33	23.2	19	3	5	0.06	0.38	25	50	50													
SW10-07		28/02/2017		4.19	0.18	5.83	21.7	30																				
SW10-07	Steady flow. Very high water level. Upstream and downstream sites connected.	16/03/2017		5.58	0.13	5.92	22.3	28	4	49	0.04	0.50	25	50	50													
SW10-07	No access - house demolition exclusion zone fencing	4/04/2017																										
SW10-07	Slight flow, moderate water level. U/s and d/s sites connected. Weather cloudy.	5/05/2017		7.58	0.12	6.67	17.8	38	2	33	0.05	0.29	25	50	50													
SW10-07	Upstream and downstream sites connected. Low flow. Moderate water level. Overcast.	14/06/2017		9.10	0.12	6.11	17.3	58																				
SW10-07	Upstream and downstream connected. Low flow, medium - high water level. Drizzle.	3/10/2017		5.22	0.19	6.64	17.6	32	1	11	0.07	0.50	25	50	50													

SW10-08 - Randles Creek

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
SW10-07	Unable to determine if upstream and downstream sites were connected. Low flow, medium - high water level. Overcast.	6/11/2017		6.94	0.11	6.84	19.5	50																				
SW10-07	Upstream and downstream sites not connected. No visible flow, low water level. Overcast.	2/12/2017		4.71	0.13	6.65	22.2	11	2	5	0.06	0.25	25	50	50													
SW10-07	Upstream and downstream sites connected. High flow, medium water level. Weather fine.	4/01/2018		6.93	0.12	6.60	23.8	15																				
SW10-07	Upstream and downstream sites connected. High flow, high water level. Rain.	2/02/2018		6.49	0.14	6.55	20.8	27	5	62	0.08	0.43	25	50	50													
SW10-07	Upstream and downstream sites connected. High flow, high water level. Weather fine.	8/03/2018		7.21	0.12	6.23	21.2	19																				
SW10-07	Upstream and downstream sites connected. High flow, High water level. Overcast.	18/04/2018		7.16	0.11	7.25	20.3	23	1	6	0.06	0.25	30	250	250													
SW10-07	Upstream and downstream sites connected. High flow, high water level. Weather fine.	1/05/2018		7.33	0.11	6.64	18.1	26																				
SW10-07	Upstream and downstream sites connected. High flow, medium water level. Overcast.	8/06/2018	8:29	8.56	0.10	6.70	15.0	35	3	15	0.06	0.23	30	250	250													
SW10-07	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	5/07/2018	16:18	5.96	0.10	6.64	16.8	44																				
SW10-07	Upstream and downstream sites connected. Medium flow, low water level. Weather fine.	28/08/2018	13:46	8.78	0.12	7.11	13.9	33	1	13	0.04	0.18	30	250	250													
SW10-07	Upstream and downstream sites connected. High flow, high water level. Overcast.	5/09/2018	7:04	8.72	0.16	6.23	14.0	51																				
SW10-07	Upstream and downstream sites connected. High flow, high water level. Rain.	11/10/2018	8:32	7.64	0.10	7.14	18.0	71	1	42	0.08	0.62	30	100	50													
SW10-07	Upstream and downstream sites connected. Low flow, medium water level. Weather fine.	20/11/2018	13:48	9.30	0.12	7.18	21.1	42																				
SW10-07	Upstream and downstream sites connected. Very low flow, very low water level. Weather fine.	24/12/2018	13:38	4.45	0.14	6.73	23.0	11																				
SW10-07	Dry, not monitored.	24/01/2019	12:53																									
SW10-07	Dry, not sampled.	22/02/2019	8:37																									
SW10-07	Unable to determine if upstream and downstream sites were connected. low flow, low water level. Drizzle.	16/03/2019	11:01	5.48	0.32	6.13	21.7	21																				
SW10-07	Upstream and downstream sites connected. Medium flow, medium water level. Overcast.	3/04/2019	8:25	5.88	0.18	6.97	19.9	16	4	3	0.03	0.29	30	100	50													
SW10-07	Unable to determine if upstream and downstream sites were connected. Low flow, medium water level. Heavy aquatic vegetation. Weather fine.	3/06/2019	10:10	6.31	0.13	6.37	14.9	16																				
SW10-07	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	5/07/2019	15:34	7.69	0.11	6.77	16.3	31	3	5	0.03	0.23	30	100	50													
SW10-07	Upstream and downstream sites connected. Medium flow, medium water level. Drizzle.	2/08/2019	14:55	4.25	0.12	6.54	15.3	18																				

SW10-08 - Randles Creek

Wet Event Monitoring

[illegible]

Dry Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																			
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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
Downstream Monitoring																												
SW11-02	Low tide. Photo taken.	10/08/2016		5.77	0.75	7.57	15.4	14																				
SW11-02		9/09/2016		7.80	5.93	6.67	19.6	11	2	11	0.08	0.67	25	50	50													
SW11-02		11/10/2016		6.34	21.30	7.05	21.3	20																				
SW11-02		3/11/2016		5.93	36.70	7.40	23.8	11	4	17	0.07	0.25	25	50	50													
SW11-02	High tide.	15/12/2016		6.62	38.30	7.61	25.6	26																				
SW11-01	Mid tide, flowing in - therefore SW11-01 is downstream.	18/01/2017		6.41	29.00	7.64	29.5	47	2	15	0.10	0.30	25	50	50													
SW11-02	High tide. Minimal flow.	3/02/2017		6.08	33.00	7.87	30.1	11																				
SW11-02	Mid, outflowing tide. Steady flow.	13/03/2017		4.29	32.80	7.19	25.8	32	5	28	0.07	0.51	25	50	50													
SW11-02	Low, outflowing tide. U/s and d/s sites connected. Overcast.	26/04/2017		5.60	3.33	6.67	20.3	34																				
SW11-02	Fine weather. U/s and d/s connected. Low tide flowing out. Low-medium water level.	11/05/2017		5.99	5.52	6.34	19.0	25	1	11	0.06	0.48	25	50	50													
SW11-02	Upstream and downstream sites connected. Outflowing tide, moderate flow. Medium water level. Weather fine.	28/06/2017		8.62	0.23	6.74	16.9	14																				
SW11-02	Upstream and downstream sites connected. Outgoing tide, steady flow, high water level. Weather fine.	14/07/2017		8.61	6.83	6.67	15.9	14	2	9	0.05	0.47	25	50	50													
SW11-01	Upstream and downstream sites connected. Incoming tide, SW11-01 is downstream. Moderate flow. Low water level. Fine.	4/08/2017		8.24	7.18	7.42	15.6	4																				
SW11-02	Upstream and downstream sites connected. Low Flow. High Tide.	7/09/2017		6.89	37.40	7.79	18.4	6	6	10	0.06	0.27	25	50	50													
SW11-01	U/S and D/s connected. Gentle flow. Incoming tide, therefore SW11-01 is downstream. Weather fine. Water level medium.	26/10/2017		4.42	5.81	7.01	21.8	18																				
SW11-02	Upstream and downstream sites connected. Outgoing tide, high water level, moderate flow. Weather fine.	22/11/2017		5.72	12.10	6.67	24.0	38	2	17	0.07	0.50	25	50	50													
SW11-01	Upstream and downstream sites connected. Medium flow, medium water level. Incoming tide, therefore SW11-01 is downstream. Weather fine.	15/12/2017		4.13	7.16	6.78	26.7	6																				
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	23/01/2018		6.26	19.10	6.73	27.9	26	1	33	0.07	0.47	25	50	50													
SW11-02	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Overcast.	14/02/2018		5.59	28.70	7.48	27.4	26																				
SW11-02	Upstream and downstream sites connected. Very low flow, very high water level. Outgoing tide. Weather fine.	15/03/2018		3.83	3.96	6.77	23.4	32	1	15	0.14	0.74	25	50	50													

SW11-02 - Duck Creek

Dry Event Monitoring

[illegible]

Dry Event Monitoring

Dry Event Monitoring

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

Dry Event Monitoring

[illegible]

SW11-02 - Duck Creek

Wet Event Monitoring

[illegible]

Wet Event Monitoring

[illegible]

Wet Event Monitoring

				In-situ (Type A) Parameters					Laboratory (Type B) Parameters																				
				Dissolved Oxygen	Electrical Conductivity	pH	Temperature	Turbidity	Oil & Grease	Suspended Solids	Total Phosphorus	Total Nitrogen	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	Aluminium - Total	Arsenic - Total	Cadmium - Total	Chromium - Total	Copper - Total	Iron - Total	Lead - Total	Manganese - Total	Mercury - Total	Nickel - Total	Selenium - Total	Silver - Total	Zinc - Total	
Monitoring Location	Field Notes	Date	Time	mg/L	mS/cm	pH unit	°C	NTU	mg/L	mg/L	mg/L	mg/L	µg/L	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	
SW11-02	Upstream and downstream sites connected. Medium flow, medium water level. Outgoing tide. Weather fine.	1/06/2020	7:53	5.73	17.60	6.64	17.7	10																					
SW11-01	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Rain.	10/09/2020	10:49	13.83	9.20	6.67	17.7	20																					
SW11-01	Upstream and downstream sites connected. Low flow, high water level. Incoming tide. Overcast.	9/11/2020	13:11	4.49	18.30	6.67	22.5	23	1	16	0.07	0.56	30	100	50	0.032	0.001	0.0005	0.001	0.001	0.160	0.001	0.239	0.0003	0.001	0.001	0.0050	0.002	
SW11-02	Upstream and downstream sites connected. Very low flow, high water level. Outgoing tide. Weather fine.	3/02/2021	15:22	6.44	11.80	7.65	27.6	17																					
SW11-01	Upstream and downstream sites connected. Very low flow, very low water level. Incoming tide. Weather fine.	3/05/2021	13:35	9.71	0.35	6.44	20.5	40	2	6	0.04	0.59	30	100	50	0.119	0.001	0.0005	0.001	0.001	0.705	0.001	0.050	0.0003	0.001	0.001	0.0005	0.002	
SW11-02	Upstream and downstream connected. Medium flow. Medium water level Outgoing tide. Drizzle	12/11/2021	8:33	3.49	18.60	6.97	23.9	31	1	19	0.09	3.25	30	100	50	0.437	0.001	0.0015	0.002	0.003	0.636	0.002	0.320	0.0050	0.004	0.002	0.0050	0.015	
SW11-02	Upstream and downstream sites connected. Medium flow, low water level. Outgoing tide. Overcast.	16/05/2022	14:43	4.44	0.28	5.34	22.6	23	6	19	0.09	0.75	30	100	50	0.858	0.001	0.0005	0.001	0.001	1.660	0.001	0.084	0.0003	0.002	0.001	0.0005	0.007	
P80 & P20 Values (calculated from baseline and upstream data below)																													
P80					25.88	7.03		61	3	25	0.15	0.83	30	100	50	0.472	0.001	0.0009	0.001	0.001	1.273	0.001	0.283	0.0022	0.003	0.001	0.0050	0.012	
P20				3.87	0.55	6.48																							
St Dev					13.03	0.42																							
Threshold				0.50				10	2	10	0.02	0.20																	
Baseline (pre-construction) Monitoring (identifier from pre-construction)																													
SW15		1/02/2013		N/A	0.50	N/A	N/A	N/A	3	19	0.05	0.80																	
SW15		1/03/2013		4.00	0.31	5.99	23.3	N/A	3	8	0.15	0.70																	
SW15		28/05/2013		8.40	6.60	6.50	16.2	18	3	11	0.06	0.70																	
SW15		5/07/2013		6.80	0.25	5.60	20.6	39	3	16	0.10	0.70																	
SW15		30/07/2013		8.90	8.38	6.60	20.6	11	3	8	0.04	0.40																	
SW15		19/11/2013		6.40	27.80	6.90	29.2	7	3	12	0.03	0.70																	
SW15		25/11/2013		8.30	23.20	7.30	27.6	6	3	3	0.46	0.05																	
Upstream Monitoring																													
SW11-01	Photo taken	4/08/2016		6.33	5.48	6.97	15.8	39																					
SW11-01		10/11/2016		5.43	35.20	7.00	27.0	24	5	17	0.06	0.28	25	50	50														

Wet Event Monitoring

[illegible]

Wet Event Monitoring

[illegible]

SW11-02 - Duck Creek

Wet Event Monitoring

[illegible]

Appendix D

Groundwater Quality: Results of Interest

Groundwater Quality Table of Results of Interest

Portion	Bore	Date	Results of Interest	P20 / P80
A	GWB3-07	2/12/2021	EC = 6.82 mS/cm pH = 6.79 Bicarbonate = 192 mg/L Total Nitrogen= 2.74 mg/L Total Phosphorus= 0.57 mg/L Calcium= 79.0 mg/L	6.59 6.62 109 2.64 0.18 63.0
A	GWB3-14	29/11/2021	EC = 0.46 mS/cm Chloride = 103 mg/L Magnesium = 11.0 mg/L Aluminium = 0.021 mg/L Copper = 0.022 mg/L	0.64 87 8.6 0.005 0.008
A	GWB3-21	29/11/2021	EC = 0.32 mS/cm Chloride = 89 mg/L Sodium = 48 mg/L Aluminium = 0.034 mg/L Copper = 0.950 mg/L	0.25 55 31 0.032 0.360
A	GWB3-32	14/12/2021	EC = 0.49 mS/cm pH = 6.05	0.29 4.07
A	GWB3-33	14/12/2021	EC = 0.18 mS/cm pH = 5.66	0.49 5.37
A	GWB3-38	7/12/2021	pH = 6.70 Bicarbonate = 19 mg/L Total Nitrogen = 1.61 mg/L Total Phosphorus = 0.14 mg/L Magnesium = 4.9 mg/L	5.64 15 1.05 0.05 4.8
A	GWB3-45	29/11/2021	EC = 1.07 mS/cm	0.86
A	GWB3-47	2/12/2021	pH = 5.82	5.22
A	GWB4-02	2/12/2021	EC = 0.82 mS/cm Bicarbonate = 248 mg/L Chloride = 62 mg/L Calcium = 49.0 mg/L Magnesium = 20.0 mg/L Zinc = 0.037 mg/L	0.53 115 50 23.2 3.4 0.019
B	GWB5-01	2/12/2021	Total Nitrogen= 42.30 mg/L Sulfate = 2080 mg/L Potassium = 247.0 mg/L Calcium = 405.0 mg/L Magnesium = 1080.0 mg/L Aluminium = 0.036 mg/L Cadmium = 0.001 mg/L Copper = 0.003 mg/L Lead = 0.026 mg/L	25.84 1050 204.7 288.4 1019.5 0.009 0.001 0.001 0.001
C	GWB8-07	29/11/2021	pH = 6.10	5.48
C	GWB8-16	29/11/2021	pH = 6.28 Bicarbonate = 42 mg/L Total Nitrogen = 2.55 mg/L Total Phosphorus = 0.53 mg/L Chloride = 134 mg/L Sulfate = 29 mg/L Potassium = 5.8 mg/L Cadmium = 0.001 mg/L Zinc = 0.083 mg/L C10-C16 Fraction = 250 ug/L	5.68 40 0.40 0.09 87 24 3.0 0.000 0.013 116
C	GWB8-22	2/12/2021	EC = 2.35 mS/cm pH = 6.81 Bicarbonate = 247 mg/L Sulfate = 54 mg/L Sodium = 420 mg/L	2.62 6.62 230 10 418

Appendix E

Groundwater Quality: Data

(Note: Italicised values in the following tables are below the practical quantification limit and have been halved to enable the calculation of statistics)

GWB3-06

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Down-gradient Monitoring																						
GWB3-06		31/08/2016	9.84	6.57	19.63	767	2.07	0.10	3330	183	1640	9.2	217.0	236.0	0.051	0.001	0.028	0.005	0.110	50	280	50
GWB3-06		30/11/2016	9.72	5.24	23.58																	
GWB3-06		6/02/2017	12.30	7.03	28.33	747	3.44	0.90	3830	246	1890	27.0	262.0	279.0	0.005	0.002	0.014	0.005	0.047	13	50	50
GWB3-06		15/05/2017	9.65	6.84	21.23																	
GWB3-06	Weather fine.	9/08/2017	11.40	6.86	18.70	736	1.14	0.05	3550	217	1720	14.0	254.0	269.0	0.005	0.001	0.014	0.005	0.070	13	50	50
GWB3-06	Weather fine.	9/11/2017	6.83	7.10	21.57	602	1.43	0.09	1740	139	1090	5.4	126.0	133.0	0.031	0.001	0.017	0.005	0.049	13	50	50
GWB3-06	Overcast	22/02/2018	11.30	6.72	21.70	744	0.72	0.07	3650	168	1950	23.0	280.0	290.0	0.003	0.001	0.033	0.001	0.030	13	50	50
GWB3-06	Weather fine.	18/05/2018	11.50	6.26	19.39																	
GWB3-06	Fine weather.	14/08/2018	7.27	6.82	19.44	702	2.12	0.12	1950	149	1100	13.0	140.0	141.0	0.018	0.001	0.009	0.005	0.076	13	50	50
GWB3-06	Weather fine.	13/11/2018	7.99	6.46	22.24																	
GWB3-06	Weather fine.	11/02/2019	4.95	7.36	23.75	639	1.49	0.17	1410	97	849	6.2	117.0	98.0	0.024	0.001	0.002	0.005	0.011	13	50	50
GWB3-06	Weather, fine.	19/06/2019	5.63	6.76	22.84																	
GWB3-06	Weather fine.	20/08/2019	7.33	6.81	21.67	765	1.16	0.23	2180	180	1130	13.0	163.0	157.0	0.025	0.001	0.002	0.005	0.005	13	50	50
GWB3-06	Weather fine.	19/11/2019	10.00	6.62	23.14																	
GWB3-06	Overcast.	12/02/2020	5.40	7.14	22.48	566	2.54	1.28	1510	142	934	5.9	99.0	110.0	0.010	0.001	0.002	0.005	0.020	13	50	50
GWB3-06	Weather fine.	27/05/2020	9.09	6.81	21.71																	
GWB3-06	Weather, fine.	26/08/2020	9.24	6.67	21.13	800	0.85	0.21	2840	201	1480	7.2	205.0	215.0	0.018	0.001	0.002	0.005	0.053	13	50	50
GWB3-06	Weather, fine.	1/03/2021	7.17	6.34	23.89	775	1.49	0.41	2480	158	1310	5.8	175.0	186.0	0.005	0.001	0.005	0.005	0.062	13	50	50
GWB3-06	Bore damaged below ground level - Hydrasleeve became snagged and broke upon attempted removal. Weather fine.	14/12/2021																				
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			13.06	7.01		954	1.38	0.20	4278	381	2230	12.0	212.8	275.0	0.022	0.001	0.096	0.005	0.140	13	50	50

GWB3-06

[illegible]

GWB3-06

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ10		13/02/2013	7.59	6.80																		
PZ10		7/05/2013	8.22	6.65																		
PZ10		27/08/2013	9.42	7.01																		
PZ10		6/01/2014	9.17	6.76																		
Up-gradient (construction) Monitoring																						
GWB3-05		31/08/2016	13.70	6.66	19.76	880	1.39	0.10	4640	345	2460	12.0	227.0	292.0	0.032	0.001	0.053	0.005	0.150	50	50	50
GWB3-05		30/11/2016	12.70	5.23	24.71																	
GWB3-05		6/02/2017	12.80	7.13	25.36	800	3.38	0.30	4060	449	2200	12.0	205.0	255.0	0.005	0.002	0.080	0.005	0.190	13	50	50
GWB3-05		15/05/2017	14.10	6.87	21.06																	
GWB3-05	Weather fine.	9/08/2017	12.90	7.01	19.06	893	0.44	0.04	4020	285	2180	11.0	213.0	277.0	0.019	0.001	0.120	0.005	0.015	13	50	50
GWB3-05	Weather fine.	9/11/2017	13.10	7.10	21.41	865	0.61	0.05	3620	317	2230	9.1	199.0	250.0	0.012	0.001	0.042	0.005	0.017	13	50	50
GWB3-05	Overcast	22/02/2018	15.00	6.62	20.87	872	0.60	0.15	4690	390	210	40.0	270.0	340.0	0.003	0.001	0.170	0.001	0.023	13	50	50
GWB3-05	Weather fine.	18/05/2018	14.10	6.46	19.16																	
GWB3-05	Fine weather.	14/08/2018	13.60	6.89	20.53	858	1.17	0.05	4330	286	2230	10.0	212.0	267.0	0.018	0.001	0.053	0.005	0.045	13	50	50
GWB3-05	Weather fine.	13/11/2018	0.00	6.05	27.65																	
GWB3-05	Weather fine.	11/02/2019	0.92	7.01	28.09	989	0.67	0.03	3680	221	2080	12.0	172.0	204.0	0.023	0.001	0.100	0.005	0.070	13	50	50
GWB3-05	Weather, fine.	19/06/2019	11.40	6.72	22.82																	
GWB3-05	Weather fine.	20/08/2019	12.70	6.80	21.87	939	0.68	0.12	4070	251	2230	9.8	198.0	234.0	0.025	0.001	0.005	0.005	0.290	13	50	50
GWB3-05	Weather fine.	19/11/2019	12.30	6.72	24.02																	
GWB3-05	Weather fine.	14/02/2020	11.30	7.42	23.96	842	0.43	0.12	3630	255	2020	7.4	169.0	203.0	0.016	0.001	0.010	0.005	0.076	13	50	50
GWB3-05	Weather fine.	27/05/2020	12.10	6.85	22.00																	
GWB3-05	Weather, fine.	26/08/2020	11.60	6.89	21.01	958	0.74	0.18	3410	304	2050	8.0	168.0	200.0	0.005	0.001	0.002	0.005	0.100	13	50	50

GWB3-06

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
GWB3-05	Weather, fine.	2/03/2021	10.00	6.47	23.18	1251	46.60	3.07	3630	114	2030	14.0	176.0	209.0	0.005	0.001	0.002	0.005	0.012	13	50	50
GWB3-05	Weather, fine.	14/12/2021	11.70	7.42	24.35	794	1.36	0.21	3770	416	2210	9.2	210.0	239.0	0.017	0.001	0.004	0.005	0.037	13	50	50

GWB3-06

[illegible]

GWB3-07

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Down-gradient Monitoring																						
GWB3-07		31/08/2016	3.51	6.09	16.31	91	1.55	0.10	784	599	590	4.5	39.9	57.9	0.005	0.001	0.009	0.005	0.220	50	50	
GWB3-07		30/11/2016	2.72	5.53	23.43																	
GWB3-07		6/02/2017	7.74	5.73	25.49	1	2.41	0.10	2230	1100	1220	7.0	135.0	180.0	0.170	0.002	0.071	0.005	0.290	13	50	50
GWB3-07		15/05/2017	8.01	5.65	21.13																	
GWB3-07	Weather fine.	9/08/2017	7.37	5.86	18.71	56	1.07	0.02	2220	891	1210	7.2	131.0	178.0	0.005	0.001	0.002	0.005	0.740	13	50	50
GWB3-07	Weather fine.	9/11/2017	7.32	5.92	20.28	57	1.88	0.02	1930	1020	1140	4.8	115.0	155.0	0.014	0.001	0.002	0.005	0.320	13	50	50
GWB3-07	Overcast	22/02/2018	8.10	5.49	21.42	39	0.90	0.04	2390	1020	210	13.0	150.0	190.0	0.076	0.000	1.450	0.005	0.310	13	50	50
GWB3-07	Weather fine.	18/05/2018	8.30	5.21	20.82																	
GWB3-07	Fine weather.	14/08/2018	8.24	5.57	19.58	49	1.69	0.02	2460	914	1330	6.7	140.0	186.0	0.012	0.001	0.002	0.005	0.130	13	50	50
GWB3-07	Weather fine.	13/11/2018	7.68	5.28	21.19																	
GWB3-07	Weather fine.	11/02/2019	7.84	7.34	23.06	49	3.10	0.22	2420	900	1330	5.6	143.0	187.0	0.005	0.001	0.002	0.005	0.062	13	50	50
GWB3-07	Weather, fine.	19/06/2019	8.29	5.23	20.44																	
GWB3-07	Weather fine.	23/08/2019	8.42	5.22	19.62	11	2.44	0.37	2470	906	1370	5.5	144.0	192.0	0.061	0.001	0.560	0.011	0.850	13	50	50
GWB3-07	Weather fine.	19/11/2019	7.54	5.17	20.79																	
GWB3-07	Overcast.	12/02/2020	4.61	6.56	22.80	130	1.66	0.23	1240	535	788	3.1	67.0	92.0	0.005	0.001	0.002	0.005	0.028	13	50	50
GWB3-07	Weather fine.	26/05/2020	6.67	5.76	21.31																	
GWB3-07	Weather, fine.	26/08/2020	7.51	5.72	19.50	55	1.74	0.02	1980	742	1090	4.3	113.0	148.0	0.013	0.001	0.045	0.005	0.400	13	50	50
GWB3-07	Weather, fine.	1/03/2021	7.18	5.58	23.33	147	4.98	0.42	2370	830	1290	4.6	137.0	188.0	0.011	0.001	0.002	0.005	0.069	13	50	50
GWB3-07	Weather fine.	2/12/2021	6.82	6.79	21.69	192	2.74	0.57	1310	461	813	3.9	79.0	106.0	0.005	0.001	0.002	0.005	0.380	13	50	50
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			6.59	6.62		109	2.64	0.18	1620	1236	1182	8.1	63.0	124.2	0.011	0.001	1.288	0.005	0.428	13	50	50

GWB3-07

[illegible]

GWB3-07

[illegible]

GWB3-07

[illegible]

GWB3-14

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCO3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Down-gradient Monitoring																						
GWB3-14		3/11/2016	0.34	6.68	21.99	48	1.55	0.03	73	0	43	1.1	1.9	10.8	0.016	0.001	0.200	0.005	0.053	50	50	50
GWB3-14		30/11/2016	0.38	6.05	20.88																	
GWB3-14		7/02/2017	0.42	6.78	22.91	33	1.38	0.10	78	52	47	1.4	2.2	11.7	0.005	0.001	0.002	0.005	0.045	13	50	50
GWB3-14	Could not collect sample from bore - hydrasleeve is caught in bore pipe.	15/05/2017																				
GWB3-14	Weather fine.	9/08/2017	0.26	5.99	18.48	23	0.45	0.03	59	7	40	0.5	1.1	5.9	0.005	0.001	0.550	0.005	0.022	13	50	50
GWB3-14	Bore pipe broken, difficult to sample. Weather fine.	9/11/2017	0.38	6.78	21.03	45	1.30	0.08	72	2	48	0.5	1.2	9.5	0.005	0.001	0.050	0.005	0.009	13	50	50
GWB3-14	Unable to sample due to bore damage.	22/02/2018																				
GWB3-14	Unable to sample due to bore damage.	18/05/2018																				
GWB3-14	Fine weather.	15/08/2018	0.43	6.50	18.16	49	1.63	0.04	88	5	54	3.5	2.4	12.0	0.005	0.001	0.025	0.005	0.006	13	50	50
GWB3-14	Overcast.	16/11/2018	0.32	6.36	20.57																	
GWB3-14	Weather fine.	12/02/2019	0.37	7.05	23.69	47	1.89	0.09	69	1	44	1.8	1.8	9.8	0.005	0.001	0.002	0.005	0.010	13	50	50
GWB3-14	Weather, fine.	26/06/2019	0.56	6.66	19.61																	
GWB3-14	Weather fine.	23/08/2019	0.42	6.49	19.35	56	1.02	0.11	71	1	46	0.6	1.9	11.0	0.005	0.001	0.002	0.005	0.016	13	50	50
GWB3-14	Weather fine.	19/11/2019	0.39	6.43	22.44																	
GWB3-14	Drizzle.	14/02/2020	0.19	5.85	22.47	13	1.28	0.06	43	5	28	0.5	1.4	3.3	0.120	0.001	0.010	0.005	0.032	13	50	50
GWB3-14	Weather fine.	26/05/2020	0.31	5.48	19.78																	
GWB3-14	Weather, fine.	25/08/2020	0.22	5.33	19.42	12	1.29	0.03	52	9	31	1.7	1.2	4.5	0.031	0.001	0.067	0.005	0.025	13	50	50
GWB3-14	Weather, fine.	2/03/2021	0.23	6.17	24.08	19	2.96	0.19	47	3	29	1.2	1.0	4.5	0.049	0.001	0.023	0.005	0.028	13	50	50
GWB3-14	Overcast	29/11/2021	0.46	6.40	21.35	11	2.09	0.38	103	5	51	1.0	2.0	11.0	0.021	0.001	0.022	0.005	0.039	13	50	50
P80 & P20 Values (calculated from baseline and up-gradient data below)																						

GWB3-14

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
P80			0.64	6.64		125	2.73	1.10	87	10	68	5.3	6.1	8.6	0.005	0.001	0.008	0.005	0.040	13	50	50
P20			0.50	6.15																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ20		14/03/2013	1.11	11.51																		
PZ20		8/09/2013	0.39	6.77																		
PZ20		28/08/2013	1.15	6.34																		
PZ20		7/01/2014	0.55	6.00																		
Up-gradient (construction) Monitoring																						
GWB3-13		3/11/2016	0.56	6.52	21.49	108	2.75	0.50	69	4	58	2.4	5.2	7.9	0.005	0.001	0.002	0.005	0.043	50	440	50
GWB3-13		30/11/2016	0.53	5.80	21.02																	
GWB3-13		7/02/2017	0.53	6.66	23.19	70	2.89	1.11	75	60	68	6.1	5.8	7.7	0.005	0.002	0.020	0.005	0.072	13	50	50
GWB3-13		15/05/2017	0.56	6.41	21.93																	
GWB3-13	Weather fine.	9/08/2017	0.64	6.56	18.58	98	0.79	0.50	77	6	67	3.1	5.2	8.2	0.005	0.001	0.005	0.005	0.012	13	50	50
GWB3-13	Hydrasleeve double-dipped. Weather fine.	9/11/2017	0.67	6.55	21.10	140	1.96	1.07	92	2	63	3.4	5.0	8.6	0.005	0.001	0.002	0.005	0.022	13	50	50
GWB3-13	Overcast	22/02/2018	0.63	6.31	22.27	82	0.59	0.97	91	213	71	4.9	6.2	8.5	0.003	0.000	0.006	0.001	0.017	13	50	50
GWB3-13	Weather fine.	18/05/2018	0.61	6.14	20.84																	
GWB3-13	Fine weather.	15/08/2018	0.56	6.51	17.86	108	1.78	0.85	72	2	62	2.9	5.3	8.2	0.005	0.001	0.030	0.005	0.022	13	50	50
GWB3-13	Overcast.	16/11/2018	0.63	6.22	20.37																	
GWB3-13	Weather fine.	12/02/2019	0.55	6.72	23.66	130	3.45	1.83	69	1	58	5.4	5.7	7.3	0.005	0.001	0.002	0.005	0.019	13	50	50
GWB3-13	Overcast.	26/06/2019	0.52	6.23	19.42																	
GWB3-13	Weather fine.	23/08/2019	0.69	6.23	18.64	125	2.00	1.18	90	11	74	3.1	7.1	10.0	0.005	0.001	0.009	0.005	0.023	13	50	50

GWB3-14

[illegible]

GWB3-18

[illegible]

GWB3-18

[illegible]

GWB3-21

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Down-gradient Monitoring																						
GWB3-21		30/08/2016	0.20	5.09	20.99	5	1.18	0.08	53	2	27	3.0	1.9	4.2	0.150	0.001	0.021	0.005	0.130	50	50	
GWB3-21		1/12/2016	0.25	6.54	19.95																	
GWB3-21		6/02/2017	0.28	5.12	24.13	1	1.73	0.40	78	35	38	4.4	1.0	7.5	0.400	0.001	2.240	0.005	0.042	13	50	50
GWB3-21		16/05/2017	0.23	4.93	19.71																	
GWB3-21		10/08/2017	0.26	4.92	19.59	6	0.43	0.04	73	2	38	3.5	1.0	5.9	0.059	0.001	0.200	0.005	0.020	13	50	50
GWB3-21	Weather fine.	13/11/2017	0.30	5.00	22.11	5	0.71	0.08	81	2	40	2.9	0.6	6.3	0.029	0.001	1.320	0.005	0.028	13	50	50
GWB3-21	Overcast	22/02/2018	0.29	4.81	21.64	5	0.36	0.05	80	111	37	8.2	1.0	7.0	0.220	0.000	0.180	0.001	0.037	13	50	50
GWB3-21	Weather fine.	21/05/2018	0.25	4.75	19.68																	
GWB3-21	Fine weather.	15/08/2018	0.33	5.00	21.12	4	2.57	0.12	90	2	42	3.9	1.2	7.1	0.060	0.001	0.550	0.005	0.087	13	50	50
GWB3-21	Weather fine.	16/11/2018	0.33	4.50	22.93																	
GWB3-21	Weather fine.	11/02/2019	0.45	5.37	24.90	4	0.64	0.06	117	9	52	7.4	2.0	8.7	0.056	0.001	0.031	0.005	0.034	13	50	50
GWB3-21	Overcast.	26/06/2019	0.36	4.55	19.99																	
GWB3-21	Weather fine.	23/08/2019	0.36	4.66	20.48	3	0.82	0.31	100	3	46	3.6	1.2	8.4	0.071	0.001	0.120	0.005	0.028	13	50	50
GWB3-21	Weather fine.	19/11/2019	0.33	4.69	24.97																	
GWB3-21	Overcast.	12/02/2020	0.24	5.57	24.64	9	0.71	0.15	61	6	35	2.1	2.7	4.8	0.260	0.001	0.041	0.005	0.030	13	50	50
GWB3-21	Weather fine.	26/05/2020	0.34	4.46	20.15																	
GWB3-21	Weather, fine.	25/08/2020	0.33	4.31	20.22	4	0.66	0.09	92	2	20	1.3	0.7	3.7	0.042	0.001	0.220	0.005	0.018	13	50	50
GWB3-21	Weather, fine.	2/03/2021	0.16	5.47	22.59	7	1.50	0.14	47	2	25	1.8	0.8	3.3	0.250	0.001	0.390	0.005	0.039	13	50	50
GWB3-21	Overcast	29/11/2021	0.32	5.00	22.25	5	0.56	0.06	89	2	48	3.1	1.5	7.6	0.034	0.001	0.950	0.005	0.055	13	50	50
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			0.25	6.20		60	2.04	0.42	55	51	31	4.0	12.0	8.5	0.032	0.001	0.360	0.005	0.087	13	50	50

GWB3-21

[illegible]

GWB3-21

[illegible]

GWB3-21

[illegible]

GWB3-29

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
Down-gradient Monitoring																						
GWB3-29	Dry	30/08/2016																				
GWB3-29	Dry	1/12/2016																				
GWB3-29	Dry	7/02/2017																				
GWB3-29	Insufficient water to sample	16/05/2017																				
GWB3-29	Dry	11/08/2017																				
GWB3-29	Dry	13/11/2017																				
GWB3-29	Dry	22/02/2018																				
GWB3-29	Dry	21/05/2018																				
GWB3-29	Dry	15/08/2018																				
GWB3-29	Dry.	16/11/2018																				
GWB3-29	Dry. Weather fine.	11/02/2019																				
GWB3-29	Bore dry. Weather fine.	26/06/2019																				
GWB3-29	Bore dry. Weather fine.	23/08/2019																				
GWB3-29	Bore dry. Overcast.	19/11/2019																				
GWB3-29	Bore dry. Overcast.	12/02/2020																				
GWB3-29	Bore dry.	26/05/2020																				
GWB3-29	Bore dry. Weather, fine.	25/08/2020																				
GWB3-29	Dry, not sampled	2/03/2021																				
GWB3-29	Bore dry. Overcast	7/12/2021																				
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			0.34	5.97		32	1.78	0.24	74	4	32	2.6	5.8	6.8	0.284	0.001	0.009	0.005	0.045	13	50	50

[illegible]

GWB3-29

[illegible]

GWB3-29

[illegible]

GWB3-31

[illegible]

GWB3-31

[illegible]

GWB3-32

[illegible]

[illegible]

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ39		15/02/2013	0.28	4.15																		
PZ39		9/05/2013	0.27	3.91																		
PZ39		30/08/2013	0.30	4.01																		
PZ39		9/01/2014	0.00	3.13																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-33

[illegible]

[illegible]

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ40		15/02/2013	0.37	5.47																		
PZ40		9/05/2013	0.95	4.98																		
PZ40	Dry	30/08/2013																				
PZ40	Dry	9/01/2014																				

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-34

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
GWB3-34		29/08/2016	0.46	6.34	18.69	169.00	4.19	0.70	38.00	18.80	59.90	9.10	13.80	16.30	0.09	0.00	0.01	0.01	0.16	50.00	280.00	160.00
GWB3-34		1/12/2016	0.44	6.40	21.77																	
GWB3-34		8/02/2017	0.50	6.82	24.31	134	3.52	0.50	44	82	64	9.6	12.9	18.0	0.052	0.001	0.002	0.005	0.030	13	50	50
GWB3-34		18/05/2017	0.52	6.50	20.59																	
GWB3-34		10/08/2017	0.44	6.60	19.63	30	26.30	0.12	39	48	58	7.7	11.9	16.7	0.050	0.001	0.400	0.005	0.900	13	50	50
GWB3-34	Weather fine.	15/11/2017	0.53	6.58	20.61	162	1.78	0.27	42	39	65	8.3	12.5	18.1	0.028	0.001	0.340	0.005	0.640	13	50	50
GWB3-34	Monitoring ceased in February 2018.																					
P80 & P20 Values (calculated from baseline data)																						
P80			0.41	6.66																		
P20			0.32	6.01																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ41		15/02/2013	0.41	6.22																		
PZ41		10/05/2013	0.20	6.85																		
PZ41		30/08/2013	0.41	6.53																		
PZ41		9/01/2014	0.42	5.70																		

Note: This bore is not part of a bore pair

GWB3-36

[illegible]

GWB3-36

[illegible]

GWB3-38

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Down-gradient Monitoring																						
GWB3-38		29/08/2016	0.27	6.13	16.39	10	1.05	0.00	64	5	28	10.0	1.1	4.9	0.012	0.001	0.009	0.005	0.099	50	50	
GWB3-38		1/12/2016	0.26	6.66	22.46																	
GWB3-38		8/02/2017	0.28	6.09	23.55	1	1.01	0.00	75	69	44	4.2	2.2	3.9	0.140	0.001	0.002	0.005	0.096	13	50	50
GWB3-38		18/05/2017	0.32	6.14	20.07																	
GWB3-38		10/08/2017	0.39	5.99	20.28	45	0.16	0.00	89	6	47	1.9	8.5	9.8	0.005	0.001	0.002	0.005	0.005	13	50	50
GWB3-38	Weather fine.	15/11/2017	0.29	5.91	21.05	12	0.99	0.02	75	3	39	3.1	2.6	5.6	0.030	0.001	0.015	0.005	0.024	13	50	50
GWB3-38	Drizzle	23/02/2018	0.35	5.42	21.00	21	1.28	0.03	89	11	120	20.0	8.4	26.0	0.081	0.001	0.025	0.005	0.036	13	50	50
GWB3-38	Weather fine.	22/05/2018	0.35	5.30	19.16																	
GWB3-38	Fine weather.	16/08/2018	0.29	5.88	20.77	29	0.97	0.04	58	4	29	4.5	1.0	4.6	0.013	0.001	0.015	0.005	0.073	13	50	50
GWB3-38	Weather fine.	20/11/2018	0.29	5.90	22.12																	
GWB3-38	Weather fine.	13/02/2019	0.30	6.20	24.15	22	1.06	0.05	67	5	28	9.3	1.3	5.0	0.005	0.001	0.002	0.005	0.029	13	50	50
GWB3-38	Overcast.	28/06/2019	0.30	5.68	20.28																	
GWB3-38	Weather fine	27/08/2019	0.28	5.72	20.41	26	0.25	0.02	67	5	27	4.8	0.8	4.8	0.005	0.001	0.002	0.005	0.032	13	50	50
GWB3-38	Weather fine.	19/11/2019	0.26	5.55	22.69																	
GWB3-38	Overcast.	14/02/2020	0.20	5.99	21.73	24	0.31	0.02	42	4	23	0.6	5.6	5.3	0.005	0.001	0.005	0.005	0.027	13	50	50
GWB3-38	Weather fine.	26/05/2020	0.39	4.87	20.65																	
GWB3-38	Weather, fine.	26/08/2020	0.30	6.18	20.29	61	0.42	0.02	61	4	30	2.8	8.0	8.2	0.005	0.001	0.011	0.005	0.035	13	50	50
GWB3-38	Weather, fine.	2/03/2021	0.29	5.97	22.94	66	0.42	0.02	59	4	30	0.9	12.0	11.0	0.005	0.001	0.002	0.005	0.014	13	50	50
GWB3-38	Overcast	7/12/2021	0.28	6.70	23.77	19	1.61	0.14	58	5	30	3.6	2.1	4.9	0.011	0.001	0.004	0.005	0.043	13	50	50
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			0.32	5.64		15	1.05	0.05	90	8	46	5.0	7.3	4.8	0.572	0.001	0.036	0.005	0.105	13	50	50

[illegible]

GWB3-38

[illegible]

GWB3-38

[illegible]

GWB3-40

[illegible]

GWB3-40

[illegible]

GWB3-41

[illegible]

GWB3-41

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-42b

[illegible]

GWB3-42b

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-43

[illegible]

GWB3-43

[illegible]

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ49		15/02/2013	0.19	4.14																		
PZ49		10/05/2013	0.18	3.98																		
PZ49		2/09/2013	0.19	4.55																		
PZ49		10/01/2014	0.19	3.36																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-45

[illegible]

[illegible]

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ50		18/02/2013	0.65	7.04																		
PZ50		13/05/2013	0.82	6.83																		
PZ50		2/09/2013	0.84	6.85																		
PZ50		10/01/2014	0.88	6.46																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-46

[illegible]

[illegible]

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ51		18/02/2013	0.60	5.87																		
PZ51		13/05/2013	1.17	5.65																		
PZ51	Dry	2/09/2013																				
PZ51		10/01/2014	0.96	5.66																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-47

[illegible]

[illegible]

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1187		18/02/2013	0.41	5.49																		
BH1187		13/05/2013	0.68	5.04																		
BH1187		2/09/2013	0.45	4.96																		
BH1187		10/01/2015	0.43	4.15																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB3-51

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCO ₃	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
Down-gradient Monitoring																						
GWB3-51		23/08/2016	0.16	5.65	20.57	11	0.25	0.02	36	5	23	1.5	1.5	1.9	0.012	0.001	0.005	0.005	0.022	50	170	50
GWB3-51		2/12/2016	0.21	6.67	25.37																	
GWB3-51	Dry	9/02/2017																				
GWB3-51		25/05/2017	0.15	5.62	21.82																	
GWB3-51	Weather fine.	24/08/2017	0.16	5.31	21.16	9	0.40	0.03	35	5	25	1.6	0.7	1.4	0.005	0.001	0.110	0.005	0.130	13	50	50
GWB3-51	Weather fine.	22/11/2017	0.16	5.62	21.74	9	0.41	0.04	35	5	24	0.5	0.6	1.5	0.005	0.001	0.200	0.005	0.180	13	50	50
GWB3-51	Bore dry. Overcast.	24/02/2018																				
GWB3-51	Insufficient water to sample. Weather fine.	23/05/2018																				
GWB3-51	Bore dry. Weather fine.	29/08/2018																				
GWB3-51	Dry.	23/11/2018																				
GWB3-51	Bore dry. Weather fine.	27/02/2019																				
GWB3-51	Insufficient water to sample. Weather fine.	27/06/2019																				
GWB3-51	Bore dry. Weather fine.	27/08/2019																				
GWB3-51	Bore dry. Overcast.	20/11/2019																				
GWB3-51	Weather fine.	20/02/2020	0.15	5.64	25.62	11	1.51	0.07	32	3	22	1.5	2.0	1.1	0.005	0.001	0.007	0.005	0.680	13	50	50
GWB3-51	Weather fine.	27/05/2020	0.15	5.45	21.48																	
GWB3-51	Insufficient water to sample. Weather, fine.	6/08/2020																				
GWB3-51	Weather, fine.	1/03/2021	0.14	5.38	23.63	9	0.73	0.07	37	3	24	1.0	1.1	1.2	0.005	0.001	0.006	0.005	0.100	13	50	50
GWB3-51	Insufficient water to sample. Overcast	2/12/2021																				
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			0.66	6.35		82	0.93	0.28	149	17	78	13.2	17.3	14.6	0.005	0.001	0.004	0.005	0.114	43	50	50

GWB3-51

[illegible]

GWB3-51

[illegible]

GWB3-51

[illegible]

GWB4-02

[illegible]

GWB4-02

[illegible]

GWB4-02

[illegible]

GWB4-06

[illegible]

GWB4-06

[illegible]

GWB4-09

[illegible]

GWB4-09

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB4-10

[illegible]

GWB4-10

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB4-11

[illegible]

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date																				
			mS/cm	pH unit	°C	mg/L	mg/L	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

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB4-12

[illegible]

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date																				
			mS/cm	pH unit	°C	mg/L	mg/L	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

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB4-17

[illegible]

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date																				
			mS/cm	pH unit	°C	mg/L	mg/L	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

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB4-18

[illegible]

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																		
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction		
			mS/cm	pH unit	°C	mg/L	mg/L	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		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB4-21

[illegible]

GWB4-21

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date																				
			mS/cm	pH unit	°C	mg/L	mg/L	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

Note: This bore is not part of a bore pair

GWB5-01

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCO ₃	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
Down-gradient Monitoring																						
GWB5-01		19/08/2016	29.20	7.90	19.93	2020	6.26	5.70	10567	2094	5870	201.0	385.0	1186.0	0.016	0.001	0.005	0.001	0.005	25	25	50
GWB5-01		30/11/2016	30.40	7.00	20.53																	
GWB5-01		14/02/2017	26.80	7.01	26.06	2040	8.69	7.10	9724	2097	5930	183.0	351.0	1116.0	0.001	0.001	0.001	0.001	0.005	25	50	50
GWB5-01		26/05/2017	28.80	7.11	20.28																	
GWB5-01	Weather fine.	15/08/2017	28.60	7.96	17.33	1840	4.62	5.96	8492	2232	5342	169.0	353.0	1092.0	0.013	0.001	0.003	0.001	0.008	25	50	50
GWB5-01	Weather fine.	27/11/2017	30.20	7.15	20.16																	
GWB5-01	Rain.	23/02/2018	27.70	7.20	20.98	2100	5.83	6.48	9034	2124	5265	173.7	333.2	1059.8	0.003	0.001	0.019	0.001	0.069	25	50	50
GWB5-01	Weather fine.	28/05/2018	29.30	7.58	20.03																	
GWB5-01	Weather fine.	24/08/2018	28.40	7.58	19.33	1760	3.33	5.42	9368	2463	5596	185.1	374.0	1077.8	0.007	0.001	0.844	0.001	0.037	30	250	250
GWB5-01	Weather fine.	13/11/2018	28.20	7.20	19.59																	
GWB5-01	Odour. Weather fine.	19/02/2019	28.80	9.95	23.42	1880	5.23	6.21	9680	2254	5810	170.8	359.8	1060.0	0.005	0.001	0.010	0.001	0.089	30	100	50
GWB5-01	Weather, fine.	19/06/2019	30.20	7.14	19.38																	
GWB5-01	Bore damaged, unable to sample.	23/08/2019																				
GWB5-01	Replacement bore recently installed. Water overflowing from top of bore pipe, which is flush with current ground level.	22/11/2019	24.80	6.12	22.67																	
GWB5-01	Water level in bore higher than ground surface. Bore repair in progress, pipe not yet extended to full height. No hydrosleeve installed at this bore. Weather, fine.	18/02/2020	26.00	6.55	25.37	980	1.05	2.33	8787	3270	4862	151.0	478.0	1082.0	0.003	0.001	0.183	0.001	0.210	30	100	50
GWB5-01	Weather fine.	25/05/2020	24.70	6.23	21.31																	
GWB5-01	Weather, fine.	24/08/2020	26.80	7.14	18.83	1510	2.06	2.03	8390	3060	5390	157.9	443.2	1120.0	0.003	0.001	1.480	0.001	0.083	30	100	50
GWB5-01	Weather, fine.	1/02/2021	24.20	7.30	26.16	1330	7.81	3.42	9614	2901	4997	154.0	452.0	1097.0	0.003	0.001	0.001	0.001	0.004	30	730	300
GWB5-01	Weather, fine	2/12/2021	27.90	7.62	24.64	2140	42.30	7.57	8990	2080	5100	247.0	405.0	1080.0	0.036	0.001	0.003	0.026	0.003	13	50	50

GWB5-01

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			32.22	7.76		2716	25.84	11.13	10763	1050	6460	204.7	288.4	1019.5	0.009	0.001	0.001	0.001	0.007	30	624	232
P20			14.75	7.16																		
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
PZ71		20/02/2013	7.28	7.39																		
PZ71		15/05/2013	16.25	7.23																		
PZ71		3/09/2013	22.30	7.37																		
PZ71		15/01/2014	20.60	7.23																		
Up-gradient (construction) Monitoring																						
GWB5-02	No access - buried / deconstructed																					
GWB5-02		30/11/2016	32.10	7.14	21.61																	
GWB5-02		16/02/2017	32.60	7.13	22.51	2700	27.10	11.00	10574	939	6481	203.0	290.0	1079.0	0.005	0.001	0.001	0.001	0.005	25	50	50
GWB5-02		26/05/2017	32.20	7.23	22.69																	
GWB5-02	Weather fine.	10/08/2017	33.40	8.11	18.33	2460	25.00	11.40	10161	783	6018	195.0	279.0	1019.0	0.011	0.001	0.001	0.001	0.004	25	50	50
GWB5-02	Weather fine.	27/11/2017	32.70	7.16	21.33																	
GWB5-02	Rain.	23/02/2018	32.30	7.35	21.84	3000	29.25	11.33	10672	515	6223	207.4	268.5	1020.2	0.007	0.001	0.001	0.001	0.008	25	50	50
GWB5-02	Overcast.	28/05/2018	31.80	7.40	20.80																	
GWB5-02	Weather fine.	24/08/2018	31.80	7.68	19.28	2740	22.00	10.50	10935	918	6446	212.9	296.6	1006.8	0.004	0.001	0.001	0.001	0.001	30	250	250
GWB5-02	Weather fine.	13/11/2018	32.20	7.32	20.33																	
GWB5-02	Weather fine.	19/02/2019	32.40	6.93	27.10	2670	23.50	10.20	10900	816	6480	188.8	269.8	1001.9	0.005	0.001	0.001	0.001	0.062	30	470	120

GWB5-01

[illegible]

GWB5-03

[illegible]

GWB5-03

[illegible]

GWB8-04

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
GWB8-04		23/08/2016	0.45	5.72	19.46	5	0.42	0.10	146	47	75	0.7	1.2	4.5	0.082	0.001	0.001	0.001	0.011	25	50	50
GWB8-04		30/11/2016	1.00	5.61	24.83																	
GWB8-04		16/02/2017	0.91	5.67	25.01	50	1.39	0.30	366	36	133	3.3	5.2	11.1	0.021	0.001	0.001	0.001	0.054	25	50	50
GWB8-04		29/05/2017	0.92	5.72	21.97																	
GWB8-04	Weather fine.	17/08/2017	0.92	6.39	20.71	45	0.83	0.60	241	16	147	1.1	6.3	12.2	0.036	0.001	0.001	0.001	0.012	25	50	50
GWB8-04	Weather fine.	27/11/2017	0.66	5.74	23.66																	
GWB8-04	Monitoring ceased in February 2018.																					
P80 & P20 Values (calculated from baseline data)																						
P80				5.76																		
P20				5.12																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1231		26/02/2013		5.0																		
BH1231		2/07/2013		5.6																		
BH1231		18/09/2013		5.2																		
BH1231		Dec-13		6.0																		

Note: This bore is not part of a bore pair

GWB8-07

[illegible]

GWB8-07

[illegible]

GWB8-07

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1234		28/02/2013		5.6																		
BH1234		4/07/2013		4.1																		
BH1234		18/09/2013		5.4																		
BH1234		Dec-13		4.8																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB8-08

[illegible]

GWB8-08

[illegible]

GWB8-08

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1235		28/02/2013		5.4																		
BH1235		4/07/2013		6.2																		
BH1235		18/09/2013		4.4																		
BH1235		Dec-13		5.9																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB8-16

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
Down-gradient Monitoring																						
GWB8-16		26/08/2016	0.29	5.83	18.03	16	0.26	0.00	41	32	43	3.6	3.0	3.8	0.024	0.001	0.120	0.001	0.020	25	50	50
GWB8-16		1/12/2016	0.28	6.09	22.50																	
GWB8-16		17/02/2017	0.27	6.02	30.13	24	0.23	0.00	41	31	29	5.6	2.4	3.5	0.005	0.001	0.001	0.001	0.005	25	50	50
GWB8-16	In-situ data download error.	30/05/2017																				
GWB8-16	Weather fine.	24/08/2017	0.40	6.84	17.83	40	1.10	0.25	56	27	49	7.0	3.4	5.2	0.005	0.001	0.001	0.001	0.032	25	50	50
GWB8-16	Overcast.	28/11/2017	0.29	5.95	21.04																	
GWB8-16	Fine.	26/02/2018	0.31	5.84	24.50	26	0.15	0.77	92	35	42	3.3	2.6	3.6	0.003	0.001	0.002	0.001	0.003	25	50	50
GWB8-16	Weather fine.	28/05/2018	0.31	5.62	20.30																	
GWB8-16	Weather fine.	23/08/2018	0.30	5.89	16.36	35	0.02	0.29	58	28	55	3.1	3.0	3.8	0.012	0.001	0.003	0.001	0.002	30	250	250
GWB8-16	Suspended red/brown particles in water column. Weather fine.	14/11/2018	0.35	5.95	19.81																	
GWB8-16	Overcast.	20/02/2019	0.33	6.07	22.56	46	0.01	0.53	90	26	30	3.6	2.6	4.4	0.007	0.001	0.005	0.001	0.018	30	50	50
GWB8-16	Overcast.	27/06/2019	0.54	6.32	20.36																	
GWB8-16	Weather fine.	22/08/2019	0.39	5.86	22.22	32	1.27	0.21	94	25	59	5.0	3.3	5.7	0.006	0.001	0.001	0.001	0.018	30	100	50
GWB8-16	Weather fine.	21/11/2019	0.29	6.02	25.51																	
GWB8-16	Orange colouration. Weather, fine.	21/02/2020	0.56	6.06	23.19	65	0.31	0.50	82	29	68	5.9	3.2	6.2	0.051	0.001	0.002	0.001	0.073	30	250	50
GWB8-16	Overcast.	20/05/2020	0.47	6.07	21.15																	
GWB8-16	Weather, fine.	24/08/2020	0.28	5.85	20.57	29	0.43	0.34	44	32	49	3.5	2.2	4.0	0.003	0.001	0.001	0.001	0.024	30	100	50
GWB8-16	Weather, fine.	1/02/2021	0.65	6.96	23.86	40	2.73	0.34	379	62	72	11.8	3.9	8.9	0.007	0.001	0.001	0.001	0.006	30	210	50
GWB8-16	Fine	29/11/2021	0.36	6.28	23.84	42	2.55	0.53	134	29	45	5.8	2.5	4.7	0.003	0.001	0.001	0.001	0.083	78	250	50
P80 & P20 Values (calculated from baseline data)																						
P80			0.37	5.68		40	0.40	0.09	87	24	64	3.0	4.0	5.0	0.040	0.000	0.001	0.001	0.013	194	116	50

[illegible]

GWB8-16

[illegible]

GWB8-16

[illegible]

GWB8-14

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
Down-gradient Monitoring																						
GWB8-14		23/08/2016	1.94	6.11	21.12	14	0.21	0.10	652	90	26	13.0	5.8	42.8	0.006	0.001	0.005	0.001	0.012	25	50	50
GWB8-14		1/12/2016	1.98	5.45	22.48																	
GWB8-14		17/02/2017	2.04	5.33	24.97	22	0.42	0.30	580	123	342	15.0	4.0	36.3	0.005	0.001	0.001	0.001	0.019	25	50	50
GWB8-14		30/05/2017	2.22	5.60	21.87																	
GWB8-14	Weather fine.	17/08/2017	2.09	6.30	22.07	25	4.52	1.46	650	100	341	13.2	3.9	36.3	0.010	0.001	0.001	0.001	0.018	25	50	50
GWB8-14	Overcast.	28/11/2017	2.19	5.79	21.65																	
GWB8-14	Fine.	26/02/2018	1.89	5.62	24.90	60	1.70	0.76	539	95	310	13.1	3.5	31.9	0.012	0.001	0.001	0.001	0.077	180	120	50
GWB8-14	Bore could not be located, possibly removed/destroyed.	28/05/2018																				
GWB8-14	Bore could not be located, possibly removed/destroyed.	23/08/2018																				
GWB8-14	Bore could not be located.	14/11/2018																				
GWB8-14	Bore could not be located.	20/02/2019																				
GWB8-14	Bore could not be located.	27/06/2019																				
GWB8-14	Bore could not be located.	22/08/2019																				
GWB8-14	Unable to locate bore.	21/11/2019																				
GWB8-14	Unable to locate bore.	21/02/2020																				
GWB8-14	Unable to locate bore.	20/05/2020																				
GWB8-14	Unable to locate bore.	24/08/2020																				
GWB8-14	Bore damaged, unable to sample.	26/02/2021																				
GWB8-14	Bore damaged, unable to sample.	2/12/2021																				
P80 & P20 Values (calculated from baseline data)																						
P80			0.54	6.29		76	11.50	1.08	136	28	67	6.2	3.6	6.2	0.015	0.001	0.003	0.001	0.028	76	542	210

GWB8-14

[illegible]

GWB8-14

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCO ₃	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1241		26/02/2013		3.8																		
BH1241		1/07/2013		5.3																		
BH1241		18/09/2013		5.6																		
BH1241		Dec-13		5.3																		
Up-gradient (construction) Monitoring																						
GWB8-17	No access - outside of project boundary	26/08/2016																				
GWB8-17	No access	29/11/2016																				
GWB8-17		23/02/2017	0.41	6.12	22.94	38	0.54	0.14	161	24	62	6.1	2.5	5.3	0.025	0.001	0.005	0.001	0.004	25	50	50
GWB8-17	Weather fine.	17/08/2017	0.49	6.90	21.21	60	13.20	0.58	99	4	67	4.8	2.9	6.1	0.014	0.001	0.001	0.001	0.011	80	130	50
GWB8-17	Overcast.	28/11/2017	0.54	6.03	20.94																	
GWB8-17	Fine.	26/02/2018	0.42	5.86	24.32	70	0.82	0.11	142	8	65	4.2	3.3	6.3	0.008	0.001	0.001	0.001	0.030	25	50	50
GWB8-17	Weather fine.	28/05/2018	0.58	6.34	20.04																	
GWB8-17	Weather fine.	23/08/2018	0.48	6.33	17.30	80	8.96	0.70	93	4	68	4.8	3.7	5.5	0.014	0.001	0.003	0.001	0.004	110	250	250
GWB8-17	Odour. Weather fine.	14/11/2018	0.43	6.08	19.94																	
GWB8-17	Weather fine.	20/02/2019	0.38	5.90	22.25	36	0.48	0.10	114	0	59	3.7	2.3	5.6	0.017	0.001	0.001	0.001	0.021	30	50	50
GWB8-17	Drizzle.	27/06/2019	0.41	6.10	19.47																	
GWB8-17	Ant nest in sample, odour present. Weather fine.	22/08/2019	0.39	6.03	21.40	42	3.21	0.77	87	2	63	4.5	3.6	5.3	0.016	0.001	0.001	0.001	0.026	69	440	210
GWB8-17	Weather fine.	21/11/2019	0.37	6.05	23.57																	
GWB8-17	Ants in sample. Weather, fine.	21/02/2020	3.14	5.86	23.26	60	2.72	1.29	82	20	66	6.3	5.2	7.5	0.010	0.001	0.001	0.001	0.067	30	810	210
GWB8-17	Overcast.	20/05/2020	0.48	6.22	20.91																	
GWB8-17	Weather, fine.	24/08/2020	0.46	6.07	21.01	46	4.26	0.62	92	13	73	5.0	2.8	6.1	0.011	0.001	0.001	0.001	0.022	30	240	50

GWB8-14

[illegible]

GWB8-22

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
Down-gradient monitoring																						
GWB8-22		26/08/2016	2.68	6.69	19.56	190	3.40	0.20	573	32	436	3.0	76.7	28.4	0.032	0.001	0.002	0.001	0.016	140	140	50
GWB8-22		1/12/2016	2.56	6.66	24.93																	
GWB8-22		17/02/2017	2.38	6.71	29.21	280	1.19	0.50	660	39	464	4.3	68.9	28.5	0.005	0.001	0.001	0.001	0.005	25	50	50
GWB8-22		24/05/2017	2.82	6.84	22.54																	
GWB8-22	Weather fine.	17/08/2017	2.59	7.41	21.85	370	11.70	1.42	685	10	438	3.4	78.6	29.7	0.014	0.001	0.001	0.001	0.011	190	50	50
GWB8-22	Overcast.	28/11/2017	2.61	6.60	23.33																	
GWB8-22	Fine.	26/02/2018	2.56	7.05	24.00	340	1.42	0.68	671	45	433	3.5	75.9	29.4	0.003	0.001	0.001	0.001	0.014	25	50	50
GWB8-22	Weather fine.	29/05/2018	2.36	6.80	20.85																	
GWB8-22	Weather fine.	22/08/2018	2.40	6.67	19.64	220	0.30	0.12	638	84	448	1.6	41.5	24.4	0.003	0.001	0.001	0.001	0.001	30	250	250
GWB8-22	Overcast.	14/11/2018	2.25	6.57	20.87																	
GWB8-22	Weather fine.	20/02/2019	2.26	6.62	23.45	255	5.37	0.77	547	56	419	2.5	35.3	22.5	0.005	0.001	0.001	0.001	0.001	30	50	50
GWB8-22	Weather, fine.	27/06/2019	2.49	6.68	19.72																	
GWB8-22	Replicate sleeve drawn twice. Strong odour. Weather fine.	21/08/2019	2.28	6.64	20.13	239	2.31	0.38	596	56	469	3.5	44.1	25.3	0.008	0.001	0.001	0.001	0.002	30	100	50
GWB8-22	Weather fine.	21/11/2019	2.39	6.62	22.62																	
GWB8-22	Weather fine.	21/02/2020	2.28	6.60	25.73	260	1.26	0.72	515	46	417	2.9	41.2	22.4	0.003	0.001	0.001	0.001	0.006	30	100	50
GWB8-22	Weather fine.	20/05/2020	2.36	6.93	20.37																	
GWB8-22	Weather, fine.	24/08/2020	2.36	6.65	19.02	230	0.47	0.31	617	145	477	2.0	40.8	25.5	0.003	0.001	0.001	0.001	0.011	30	220	50
GWB8-22	Weather, fine.	26/02/2021	2.33	6.77	25.34	256	8.13	0.83	590	68	392	4.4	35.7	20.1	0.008	0.001	0.001	0.001	0.008	64	490	50
GWB8-22	Overcast	2/12/2021	2.35	6.81	22.69	247	2.09	0.40	563	54	420	2.5	40.1	22.9	0.007	0.001	0.001	0.001	0.022	30	100	50
P80 & P20 Values (calculated from baseline and up-gradient data below)																						
P80			2.77	6.62		230	2.96	0.53	790	10	418	4.8	73.7	59.2	0.015	0.001	0.001	0.001	0.0488	180	100	50

[illegible]

GWB8-22

[illegible]

GWB8-22

[illegible]

GWB8-26

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
GWB8-26	Could not locate; need to slash long grass	26/08/2016																				
GWB8-26		1/12/2016	0.24	5.82	22.84																	
GWB8-26		17/02/2017	0.17	6.77	32.60	28	5.68	0.80	89	12	32	3.4	2.8	1.9	0.326	0.001	0.001	0.001	0.005	25	50	50
GWB8-26		24/05/2017	1.79	6.91	21.19																	
GWB8-26	Weather fine.	24/08/2017	0.33	7.20	17.44	60	2.79	0.23	38	18	28	1.5	32.2	2.4	0.240	0.001	0.001	0.001	0.009	25	50	50
GWB8-26	Overcast.	28/11/2017	0.28	6.02	23.23																	
GWB8-26	Monitoring ceased in February 2018.																					
P80 & P20 Values (calculated from baseline data)																						
P80				5.62																		
P20				5.02																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1253		27/03/2013		4.6																		
BH1253		3/07/2013		5.8																		
BH1253		18/09/2013		5.3																		
BH1253		Dec-13		5.5																		

Note: This bore is not part of a bore pair

GWB9-01

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
GWB9-01	Can't access - residents	26/08/2016																				
GWB9-01	No access	1/12/2016																				
GWB9-01	No access	17/02/2017																				
GWB9-01	No access	24/05/2017																				
GWB9-01	Weather fine. First access.	24/08/2017	0.10	6.08	19.00	15	0.68	0.09	19	3	14	0.5	0.9	2.3	0.659	0.001	0.001	0.001	0.008	25	50	50
GWB9-01	Overcast.	28/11/2017	0.11	5.30	21.57																	
GWB9-01	Probe error. No In-situ data recorded. - EC and pH sampled as lab parameters	22/02/2018	0.16	5.25		20	3.45	0.56	90	10	17	1.7	1.2	3.9	0.357	0.001	0.019	0.001	0.367	25	50	50
GWB9-01	Weather fine.	29/05/2018	0.14	5.05	20.76																	
GWB9-01	Weather fine.	22/08/2018	0.11	5.35	18.74	6	1.93	0.31	26	8	18	1.5	0.4	1.8	0.502	0.001	0.002	0.001	0.013	30	250	250
GWB9-01	Overcast	14/11/2018	0.10	5.25	21.13																	
GWB9-01	Weather fine.	20/02/2019	0.13	5.77	21.59	19	4.78	0.75	69	5	16	1.4	1.1	2.0	0.316	0.001	0.003	0.001	0.122	30	50	50
GWB9-01	Overcast.	27/06/2019	0.11	5.55	18.04																	
GWB9-01	Weather fine.	21/08/2019	0.11	5.09	19.51	7	0.46	0.04	29	3	17	1.8	0.4	2.2	0.507	0.001	0.001	0.001	0.019	30	100	50
GWB9-01	Weather fine.	21/11/2019	0.13	5.35	20.73																	
GWB9-01	Weather fine.	26/02/2020	0.86	4.82	21.48	6	0.18	0.04	246	24	102	8.3	6.6	20.7	0.944	0.001	0.004	0.001	0.092	30	100	50
GWB9-01	Overcast.	20/05/2020	0.14	5.16	19.31																	
GWB9-01	Weather, fine.	26/08/2020	0.19	5.32	18.06	6	0.80	0.05	85	83	18	6.7	0.8	2.4	0.400	0.001	0.004	0.001	0.136	30	360	50
GWB9-01	Weather, fine.	26/02/2021	0.34	5.52	24.40	5	0.49	0.33	147	18	70	3.1	4.0	12.4	0.470	0.001	0.016	0.001	0.077	30	100	50
GWB9-01	Fine	29/11/2021	0.16	5.41	22.19	9	0.66	0.05	61	9	21	1.3	0.8	3.8	0.395	0.001	0.001	0.001	0.056	30	100	50

P80 & P20 Values (calculated from baseline data)

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
P80				5.64																		
P20				4.62																		
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1254		26/02/2013		3.6																		
BH1254		3/07/2013		5.3																		
BH1254		18/09/2013		5.6																		
BH1254		Dec-13		5.7																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB9-02

[illegible]

GWB9-02

[illegible]

GWB9-02

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1255		27/02/2013		4.1																		
BH1255		3/07/2013		5.9																		
BH1255		18/09/2013		5.7																		
BH1255		Dec-13		8.2																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB9-03

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																						
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	TSS	TDS	Bicarbonate as CaCO3	Water Hardness as CaCO3	Ammonia	Nitrate	Nitrite	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	Arsenic - Filtered	Chromium - Filtered	
			mS/cm	pH unit	°C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
GWB9-03		26/08/2016	0.16	4.94	21.98			1					1.35	0.10	20	5	15	1.3	0.4	2.3	1.198	0.001	0.004	0.001	0.017			
GWB9-03		2/12/2016	0.12	4.62	25.47																							
GWB9-03		22/02/2017	0.14	4.61	23.10			1					1.88	0.07	80	25	15	6.1	0.5	2.1	1.211	0.001	0.005	0.001	0.010			
GWB9-03		30/05/2017	0.13	4.64	20.49																							
GWB9-03	No access due to asbestos risk.	24/08/2017																										
GWB9-03	Overcast.	28/11/2017	0.12	5.03	23.31																							
GWB9-03	Overcast.	22/02/2018	0.12	5.14	23.26	1914	100	20	25	0.423	0.003	0.062	5.02	0.52	76	9	19	1.7	4.2	2.4	0.998	0.001	0.022	0.001	0.037	0.003	0.001	
GWB9-03	Bore could not be accessed in May due to locked gate. Accessed in June.	21/06/2018	0.17	5.08	21.70	98	148	15	18	0.418	0.003	0.046	2.41	0.14	16	18	21	4.5	3.8	2.1	0.801	0.001	0.004	0.001	0.018	0.001	0.001	
GWB9-03	Weather fine.	22/08/2018	0.13	5.03	19.74	303	125	8	25	0.403	0.003	0.049	2.32	0.19	45	8	17	1.6	5.1	3.0	0.815	0.001	0.002	0.001	0.021	0.001	0.001	
GWB9-03	Lab sample taken. Weather fine.	14/11/2018	0.13	4.99	23.07	136	190	8	23	0.624	0.003	0.058	2.27	0.20	137	125	20	1.7	4.2	3.0	1.086	0.001	0.001	0.001	0.057	0.002	0.001	
GWB9-03	Overcast.	21/02/2019	0.17	5.30	24.86	106	184	21	23	4.434	0.003	0.053	6.77	0.29	30	4	20	2.7	4.6	2.9	1.006	0.001	0.002	0.001	0.039	0.001	0.002	
GWB9-03	Odour. Drizzle.	25/06/2019	0.11	5.06	19.87	181	148	8	15	1.394	0.003	0.058	3.79	0.26	45	32	17	1.7	2.5	2.1	0.755	0.001	0.004	0.001	0.033	0.001	0.001	
GWB9-03	Slight odour. Weather fine.	23/08/2019	0.19	5.20	22.56	40	206	9	17	0.382	0.003	0.061	1.38	0.22	31	19	20	2.7	2.2	2.8	0.822	0.001	0.001	0.001	0.012	0.002	0.001	
GWB9-03	Yellow-orange colouration. Weather fine.	21/11/2019	0.16	4.75	25.01	64	170	1	21	0.477	5.655	0.036	3.55	0.12	19	27	22	1.5	2.6	3.6	0.705	0.001	0.003	0.001	0.026	0.001	0.001	
GWB9-03	Weather fine.	26/02/2020	0.14	5.14	27.36	131	195	16	16	0.062	0.003	0.071	1.80	0.13	14	18	19	2.2	2.2	2.5	0.874	0.001	0.001	0.001	0.170	0.001	0.001	
GWB9-03	Overcast.	19/05/2020	0.13	4.69	23.96	41	81	6	15	0.330	0.003	0.041	1.29	0.13	15	16	18	1.5	2.1	2.3	0.824	0.001	0.039	0.001	0.089	0.001	0.001	
GWB9-03	Weather, fine.	26/08/2020	0.11	4.87	20.25			6					1.31	0.16	76	95	15	1.4	1.2	1.4	0.659	0.001	0.003	0.001	0.036			
GWB9-03	Weather, fine.	16/02/2021	0.15	4.99	23.73			6					1.18	0.11	4	2	22	2.8	1.7	2.3	0.869	0.001	0.001	0.001	0.073			
GWB9-03	Fine	29/11/2021	0.10	5.36	23.51			15					1.30	0.10	26	9	17	1.6	1.3	1.2	0.724	0.001	0.001	0.001	0.032			
P80 & P20 Values (calculated from baseline data)																												
P80																												
P20																												
Baseline (pre-construction) Monitoring (identifier from pre-construction)																												
BH1256																												
BH1256																												
BH1256																												
BH1256																												

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB9-03

Laboratory (Type B) Parameters																										
Monitoring Location	Field Notes	Date	Mercury - Filtered	Nickel - Filtered	Iron - Filtered	Manganese - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	BTEX - toluene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benz(a)pyrene	Benz(b) and (k) flouranthene	Benz(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Sum of reported PAHs
			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	µg/L	µg/L	µg/L
GWB9-03		26/08/2016					25	50	50																	
GWB9-03		2/12/2016																								
GWB9-03		22/02/2017					25	50	50																	
GWB9-03		30/05/2017																								
GWB9-03	No access due to asbestos risk.	24/08/2017																								
GWB9-03	Overcast.	28/11/2017																								
GWB9-03	Overcast.	22/02/2018	0.0003	0.001	1.571	0.057	25	50	50	5.0	0.5	0.5	0.5	0.5	0.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Not Detected
GWB9-03	Bore could not be accessed in May due to locked gate. Accessed in June.	21/06/2018	0.0003	0.001	1.372	0.033	30	250	250	0.3	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	0.5
GWB9-03	Weather fine.	22/08/2018	0.0003	0.002	1.755	0.038	30	250	250	0.5	0.5	0.5	0.5	0.5	0.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0
GWB9-03	Lab sample taken. Weather fine.	14/11/2018	0.0003	0.001	2.088	0.040	30	250	250	0.3	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	0.5
GWB9-03	Overcast.	21/02/2019	0.0003	0.001	2.587	0.049	95	420	100	3.1	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	0.5
GWB9-03	Odour. Drizzle.	25/06/2019	0.0003	0.001	1.592	0.028	30	100	50	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.5
GWB9-03	Slight odour. Weather fine.	23/08/2019	0.0050	0.013	1.331	0.019	30	100	50	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.5
GWB9-03	Yellow-orange colouration. Weather fine.	21/11/2019	0.0003	0.001	1.796	0.026	30	100	50	0.3	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	0.5
GWB9-03	Weather fine.	26/02/2020	0.0003	0.002	2.904	0.051	30	100	50	0.3	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	0.5
GWB9-03	Overcast.	19/05/2020	0.0005	0.001	2.049	0.034	30	100	50	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.5
GWB9-03	Weather, fine.	26/08/2020					30	200	50																	
GWB9-03	Weather, fine.	16/02/2021					30	220	50																	
GWB9-03	Fine	29/11/2021					30	100	50																	
P80 & P20 Values (calculated from baseline data)																										
P80																										
P20																										
Baseline (pre-construction) Monitoring (identifier from pre-construction)																										
BH1256																										
BH1256																										
BH1256																										
BH1256																										

Note: Yet to be determined whether this is an up-gradient or down-gradient t

GWB9-04b

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
GWB9-04b	Could not locate bore	26/08/2016																				
GWB9-04b	Could not locate bore	2/12/2016																				
GWB9-04b	Could not locate bore	22/07/2017																				
GWB9-04b	Could not locate bore	30/05/2017																				
GWB9-04b	No access due to asbestos risk.	24/08/2017																				
GWB9-04b	Could not locate bore	27/11/2017																				
GWB9-04b	Monitoring ceased in February 2018.	22/02/2018																				
P80 & P20 Values (calculated from baseline data)																						
P80																						
P20																						
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						

Note: This bore is not part of a bore pair

GWB9-08

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCO3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
Down-gradient Monitoring																						
GWB9-08	No access	26/08/2016																				
GWB9-08	No access	2/12/2016																				
GWB9-08	No access	22/02/2017																				
GWB9-08		29/05/2017	1.18	6.41	21.26																	
GWB9-08	Weather fine.	24/08/2017	1.11	7.36	19.89	175	0.62	0.98	52	358	77	16.7	56.8	90.6	0.031	0.001	0.0005	0.001	0.009	25	50	50
GWB9-08	Overcast.	28/11/2017	1.42	6.23	21.72																	
GWB9-08		22/02/2018	1.44	6.39	22.18	160	0.67	2.08	107	596	75	14.0	76.9	126.3	0.034	0.001	0.0005	0.001	0.007	25	50	50
GWB9-08	Weather fine.	29/05/2018	1.52	6.39	20.71																	
GWB9-08	Weather fine.	22/08/2018	1.56	6.76	16.91	165	0.43	1.31	61	585	76	19.6	76.4	115.3	0.027	0.001	0.0010	0.001	0.019	30	250	250
GWB9-08	Weather fine.	14/11/2018	1.43	6.32	21.38																	
GWB9-08	Weather fine.	20/02/2019	1.05	6.40	22.26	195	2.03	1.37	88	361	71	13.5	55.4	85.6	0.028	0.001	0.0005	0.001	1.349	30	50	50
GWB9-08	Weather, fine.	27/06/2019	1.34	6.44	18.41																	
GWB9-08	Bore damaged below ground level, unable to sample. Repairs required.	21/08/2019																				
GWB9-08	Bore damaged, unable to sample.	21/11/2019																				
GWB9-08	Bore damaged, unable to sample.	26/02/2020																				
GWB9-08	Bore damaged, unable to sample.	19/05/2020																				
GWB9-08	Bore damaged, unable to sample.	26/08/2020																				
GWB9-08	Bore damaged, unable to sample.	26/02/2021																				
GWB9-08	Bore damaged, unable to sample.	2/12/2021																				
P80 & P20 Values (calculated from baseline and up-gradient data below)																						

GWB9-08

[illegible]

GWB9-08

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																	
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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	
Down-gradient Baseline (pre-construction) Monitoring (identifier from pre-construction)																							
BH1261		2/04/2013		6.00																			
BH1261		3/07/2013		6.40																			
BH1261		19/09/2013		6.60																			
BH1261		Dec-13		6.30																			
Up-gradient (construction) Monitoring																							
GWB9-07	No access	26/08/2016																					
GWB9-07	No access	2/12/2016																					
GWB9-07	No access	22/02/2017																					
GWB9-07		29/05/2017	0.22	5.04	22.89																		
GWB9-07	Weather fine.	24/08/2017	0.21	5.86	19.51	2	0.62	0.04	47	4	31	1.9	1.6	3.5	0.476	0.001	0.0005	0.001	0.008	25	50	50	
GWB9-07	Overcast.	28/11/2017	0.20	5.00	22.93																		
GWB9-07	Overcast.	22/02/2018	0.22	5.15	22.18	30	2.75	0.25	93	16	38	2.1	1.7	3.6	0.360	0.001	0.0005	0.001	0.006	25	50	50	
GWB9-07	Weather fine.	29/05/2018	0.23	5.46	21.50																		
GWB9-07	Weather fine.	22/08/2018	0.18	5.22	18.05	12	3.12	0.34	40	4	33	1.6	1.4	3.2	0.525	0.001	0.0006	0.001	0.010	30	250	250	
GWB9-07	Water slightly higher than ground level. Weather fine.	14/11/2018	0.17	5.25	21.50																		
GWB9-07	Weather fine.	20/02/2019	0.20	5.32	23.58	11	2.05	0.24	87	0	28	1.7	1.5	3.4	0.437	0.001	0.0005	0.001	0.007	30	50	50	
GWB9-07	Water level in bore is above ground level. Sand and small amount of soil in sleeve. Weather, fine.	27/06/2019	0.26	5.87	18.65																		
GWB9-07	Water level in bore higher than ground level. Weather fine.	21/08/2019	0.22	5.02	19.43	9	2.04	0.23	51	3	33	6.6	2.1	3.5	0.518	0.001	0.0005	0.001	0.169	30	100	50	
GWB9-07	Weather fine.	21/11/2019	0.22	4.98	23.04																		
GWB9-07	Water level in bore pipe higher than ground level. Ants in sample. Weather, fine.	26/02/2020	0.27	5.22	23.14	24	1.60	0.09	82	2	32	5.8	2.5	3.6	0.316	0.001	0.0005	0.001	0.038	30	870	50	

GWB9-08

[illegible]

GWB10-02

[illegible]

GWB10-02

[illegible]

GWB10-05

[illegible]

GWB10-05

[illegible]

GWB10-05

[illegible]

GW03

[illegible]

GW03

[illegible]

GW056965

[illegible]

[illegible]

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB10-08

[illegible]

Note: The pair to this bore is not a quality bore

GWB10-09

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
GWB10-09	cant locate; perhaps under grass- need to slash	26/08/2016																				
GWB10-09	Cannot locate	2/12/2016																				
GWB10-09		23/02/2017	0.99	6.17	23.67	92	0.15	0.17	276	59	202	4.9	6.6	8.7	0.025	0.001	0.005	0.001	0.011	25	50	50
GWB10-09		24/05/2017	1.04	6.33	21.54																	
GWB10-09	Fine weather.	14/08/2017	1.01	6.95	21.64	125	0.73	0.67	216	35	200	1.4	8.6	9.9	0.025	0.001	0.005	0.001	0.001	25	50	50
GWB10-09	Could not locate bore - potentially buried.	29/11/2017																				
GWB10-09	Monitoring ceased in February 2018.																					
P80 & P20 Values (calculated from baseline data)																						
P80																						
P20																						
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1278																						

Note: This bore is not part of a bore pair

GWB10-11

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
Monitoring Location	Field Notes	Date	Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
			mS/cm	pH unit	°C	mg/L	mg/L	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
GWB10-11		26/08/2016	0.32	5.92	21.66	40	1.55	0.70	31	45	58	1.0	0.9	1.6	0.163	0.001	0.001	0.001	0.006	160	410	170
GWB10-11		2/12/2016	0.36	5.88	25.57																	
GWB10-11		23/02/2017	0.39	6.04	23.49	68	2.23	1.70	95	73	68	3.9	1.4	2.0	0.025	0.001	0.005	0.001	0.001	25	50	50
GWB10-11		24/05/2017	0.55	6.34	20.63																	
GWB10-11	Fine weather.	14/08/2017	0.68	7.04	23.17	35	2.96	1.35	61	47	68	1.3	2.2	4.4	0.021	0.001	0.011	0.001	0.038	25	50	50
GWB10-11	Overcast.	29/11/2017	0.39	5.84	21.91																	
GWB10-11	Monitoring ceased in February 2018.																					
P80 & P20 Values (calculated from baseline data)																						
P80																						
P20																						
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1280																						

Note: This bore is not part of a bore pair

GWB11-03

[illegible]

GWB11-03

[illegible]

GWB11-03

			In-situ (Type A) Parameters			Laboratory (Type B) Parameters																
			Electrical Conductivity	pH	Temperature	Bicarbonate as CaCo3	Total Nitrogen	Total Phosphorus	Chloride	Sulfate	Sodium	Potassium	Calcium	Magnesium	Aluminium - Filtered	Cadmium - Filtered	Copper - Filtered	Lead - Filtered	Zinc - Filtered	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Monitoring Location	Field Notes	Date	mS/cm	pH unit	°C	mg/L	mg/L	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
Baseline (pre-construction) Monitoring (identifier from pre-construction)																						
BH1285		27/02/2013		6.8																		
BH1285		1/07/2013		7.2																		
BH1285		19/09/2013		8.2																		
BH1285		Dec-13		7.4																		

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

GWB11-04

[illegible]

Note: Yet to be determined whether this is an up-gradient or down-gradient bore

Appendix F

Groundwater Levels: Results of Interest

Groundwater Levels Table of Results of Interest

Portion	Bore	P80 Level Difference	Results of Interest
A	GWB3-21	2.035 m	26/02/22 - 10/04/2022 (approx. 1.5 months) (max. level difference approx. 11.337 m)
A	GWB3-32	0.678 m	26/07/2021 - 28/07/2021 (approx. 2 days) (max. level difference approx. 0.752 m) 30/07/2021 - 31/07/2021 (approx. 2 days) (max. level difference approx. 0.858 m) 2/08/2021 - 03/08/2021 (approx. 1 day) (max. level difference approx. 0.743 m) 04/08/2021 - 21/10/2021 (approx. 2.5 months) (max. level difference approx. 1.935 m) 24/10/2021 - 1/12/2021 (approx. 1 month) (max. level difference approx. 2.024 m) 4/12/2021 - 14/12/2021 (approx. 2 weeks) (max. level difference approx. 3.196 m) 17/01/2022 - 03/02/2022 (approx. 2 weeks) (max. level difference approx. 2.153 m) 05/02/2022 - 23/02/2022 (approx. 2 weeks) (max. level difference approx. 2.047 m) 24/02/2022 - 04/05/2022 (approx. 2.5 months) (max. level difference approx. 8.276 m) 16/05/2022 - 28/05/2022 (approx. 2 weeks) (max. level difference approx. 1.619 m)
A	GWB3-38	14.202 m	02/01/2022 - 07/01/2022 (approx. 1 week) (max. level difference approx. 14.271 m) 5/05/2022 - 08/06/2022 (approx. 1 month) (max. level difference approx. 14.738 m)
B	GWB5-02	1.171 m	29/03/21 - 28/02/2022 (approx. 11 months) (max. level difference approx. 1.592 m) ¹ 11/03/2022 - 01/04/2022 (approx. 3 weeks) (max. level difference approx. 0.901 m) 03/04/2022 (approx. 6hrs) (max level difference approx. 0.181 m) 04/04/2022 - 09/06/2022 (approx. 2 months) (max. level difference approx. 0.935 m)

C	GWB8-22	0.746 m	29/06/2021 - 07/07/2021 (approx. 1 week) (max. 0.894 m)¹ 09/07/2021 - 10/07/2021 (approx. 2 days) (max. level difference 0.82 m) 13/10/2021 - 15/10/2021 (approx. 2 days) (max. level difference 0.846 m) 18/10/2021 - 20/10/2021 (approx. 2 days) (max. level difference 0.827 m) 21/10/2021 - 23/10/2021 (approx. 2 days) (max. level difference 0.907 m) 25/11/2021 - 28/11/2021 (approx. 3 days) (max. level difference 0.868 m) 30/11/2021 - 09/12/2021 (approx. 1 week) (max. level difference 0.908 m) 29/12/2021 (approx. 6 hours) (max. level difference 0.752 m) 05/01/2022 - 06/01/2022 (approx. 2 days) (max. level difference 0.756 m) 20/01/2022 - 23/01/2022 (approx. 2 days) (max level difference 0.805 m)
C	GWB8-25	0.121 m	03/06/2021 - 25/11/2021 (approx. 6 months) (max. level difference 0.643 m)¹
C	GWB9-02	0.135 m	02/07/2021 - 04/07/2021 (approx. 2 days) (max. level difference 0.168 m) 02/12/2021 - 13/12/2021 (approx. 2 weeks) (max. level difference 0.275 m) 28/12/2021 - 11/01/2022 (approx. 2 weeks) (max. level difference 0.334) 21/01/2022 - 28/01/2022 (approx. 1 week) (max. level difference 0.316 m) 03/02/2022 - 11/02/2022 (approx. 1 week) (max. level difference 0.309) 23/02/2022 - 28/02/2022 (approx. 1 week) (max. level difference 0.277 m) 08/03/2022 - 30/03/2022 (approx. 3 weeks) (max. level difference 0.317 m) 04/04/2022 - 31/05/2022 (approx. 2 months) (max. level difference 0.316 m)
C	GWB9-10	2.137 m	11/02/2022 - 22/02/2022 (approx. 2 weeks) (max. level difference 2.163 m) 19/03/2022 - 25/03/2022 (approx. 1 week) (max. level difference 2.224 m) 18/04/2022 - 08/05/2022 (approx. 3 weeks) (max. level difference 2.236 m) 09/05/2022 - 15/05/2022 (approx. 1 week) (max. level difference 2.187 m) 20/05/2022 - 21/05/2022 (approx. 2 days) (max. level difference 2.147 m) 30/05/2022 - 31/05/2022 (approx. 2 days) (max. level difference 2.161 m)

D	GWB10-03	1.121 m	11/04/21 - 01/07/21 (approx. 3 months) (max. level difference 1.372 m) ¹ 06/07/2021 - 21/09/2021 (approx. 2.5 months) (max. level difference 1.327 m) 24/09/2021 (approx. 6 hrs) (max. level difference 1.127 m)
D	GWB10-05	1.365 m	20/08/2021 - 24/08/2021 (approx. 3 days) (max. level difference 1.374 m) 11/02/2022 - 12/02/2022 (approx. 1 day) (max. level difference 1.379 m) 17/02/2022 - 23/02/2022 (approx. 5 days) (max. level difference 1.443 m) 04/03/2022 - 27/03/2022 (approx. 3 weeks) (max. level difference 1.771 m) 28/03/2022 - 29/03/2022 (approx. 1 day) (max. level difference 1.426 m) 01/04/2022 - 31/05/2022 (approx. 2 months) (max. level difference 2.141 m)

Notes:

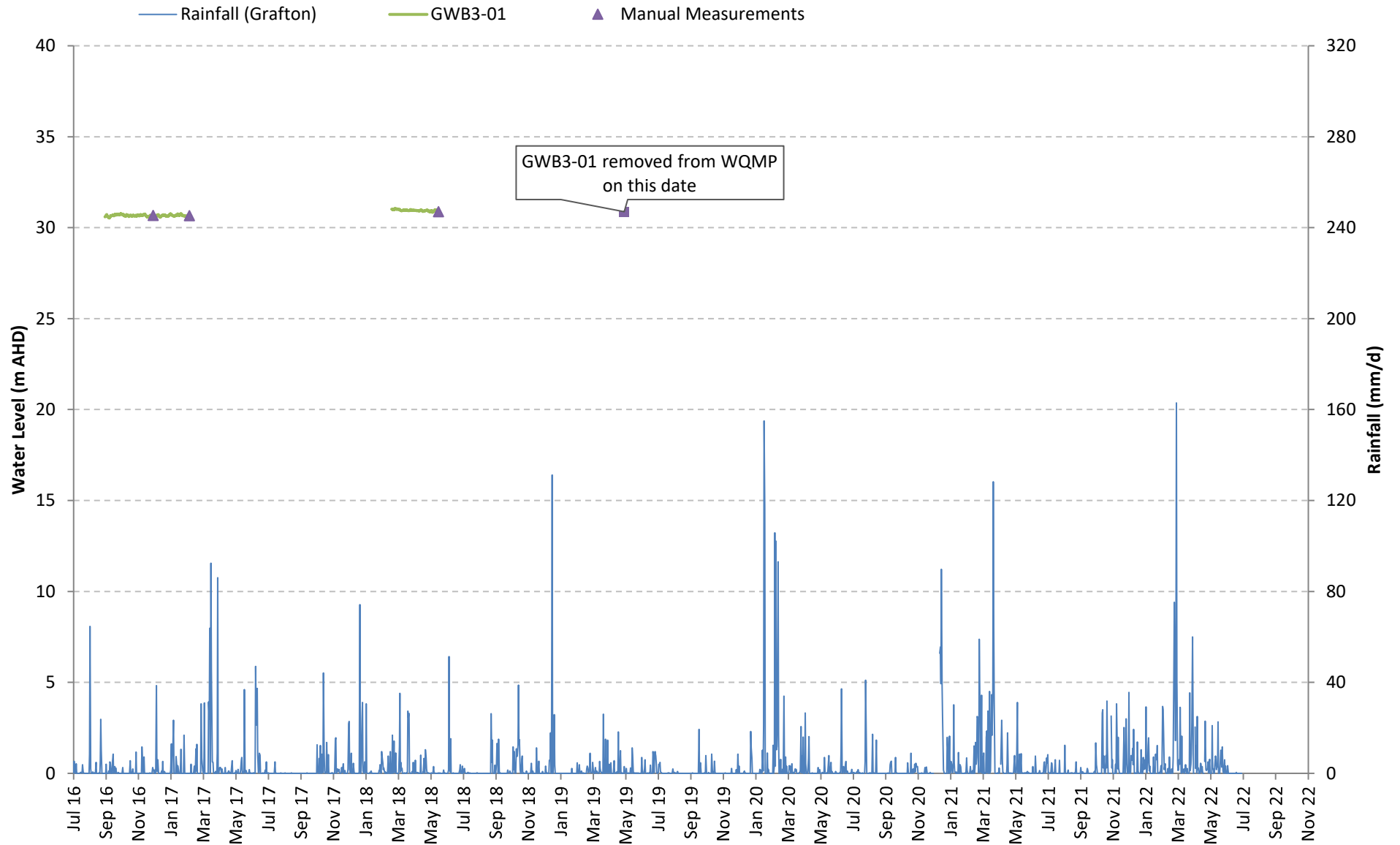
¹ part of the period of exceedence falls within a previous reporting period and has previously been r

² all or part of the period of exceedence falls within a previous reporting period but has not

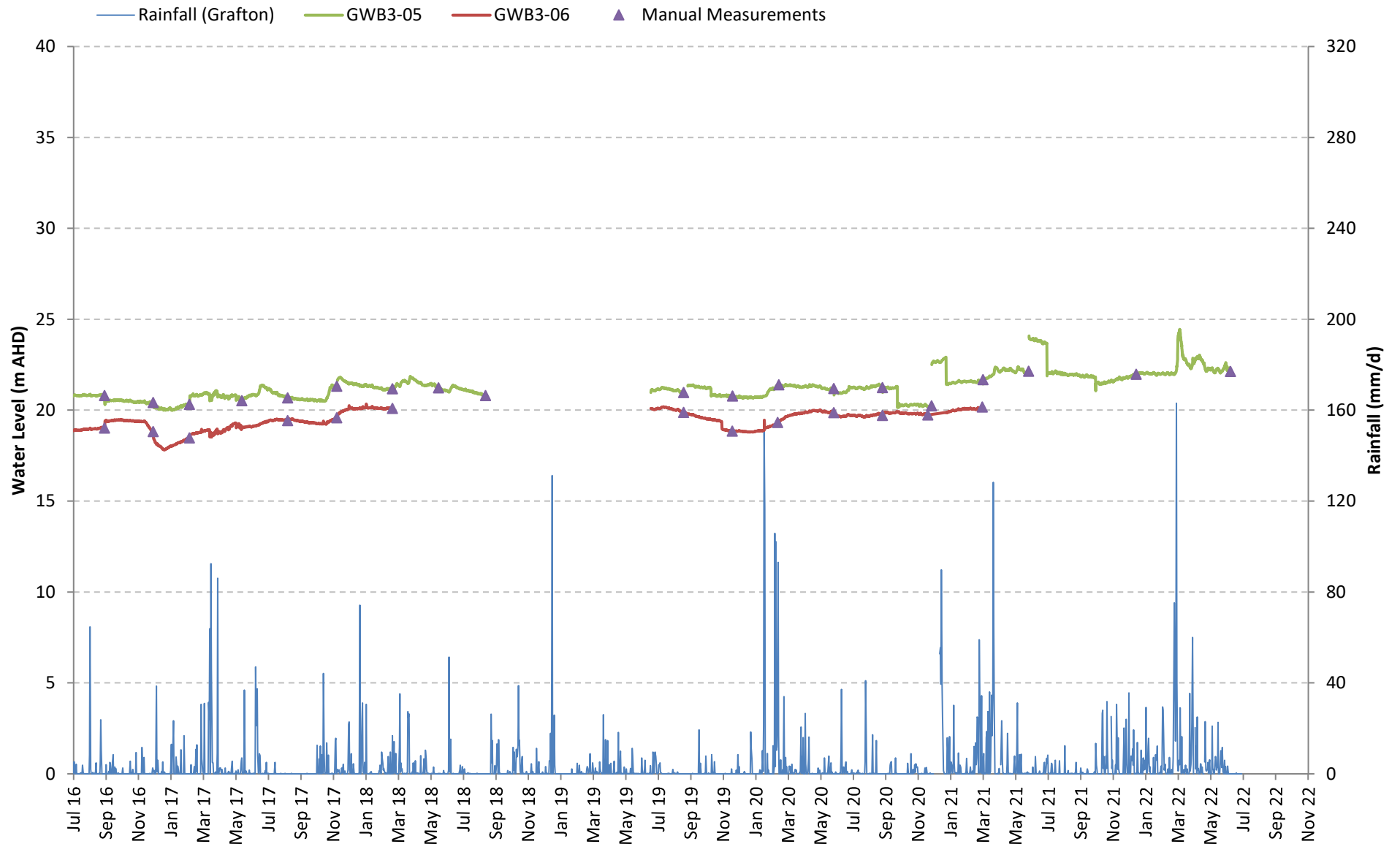
Appendix G

Groundwater Levels: Charts

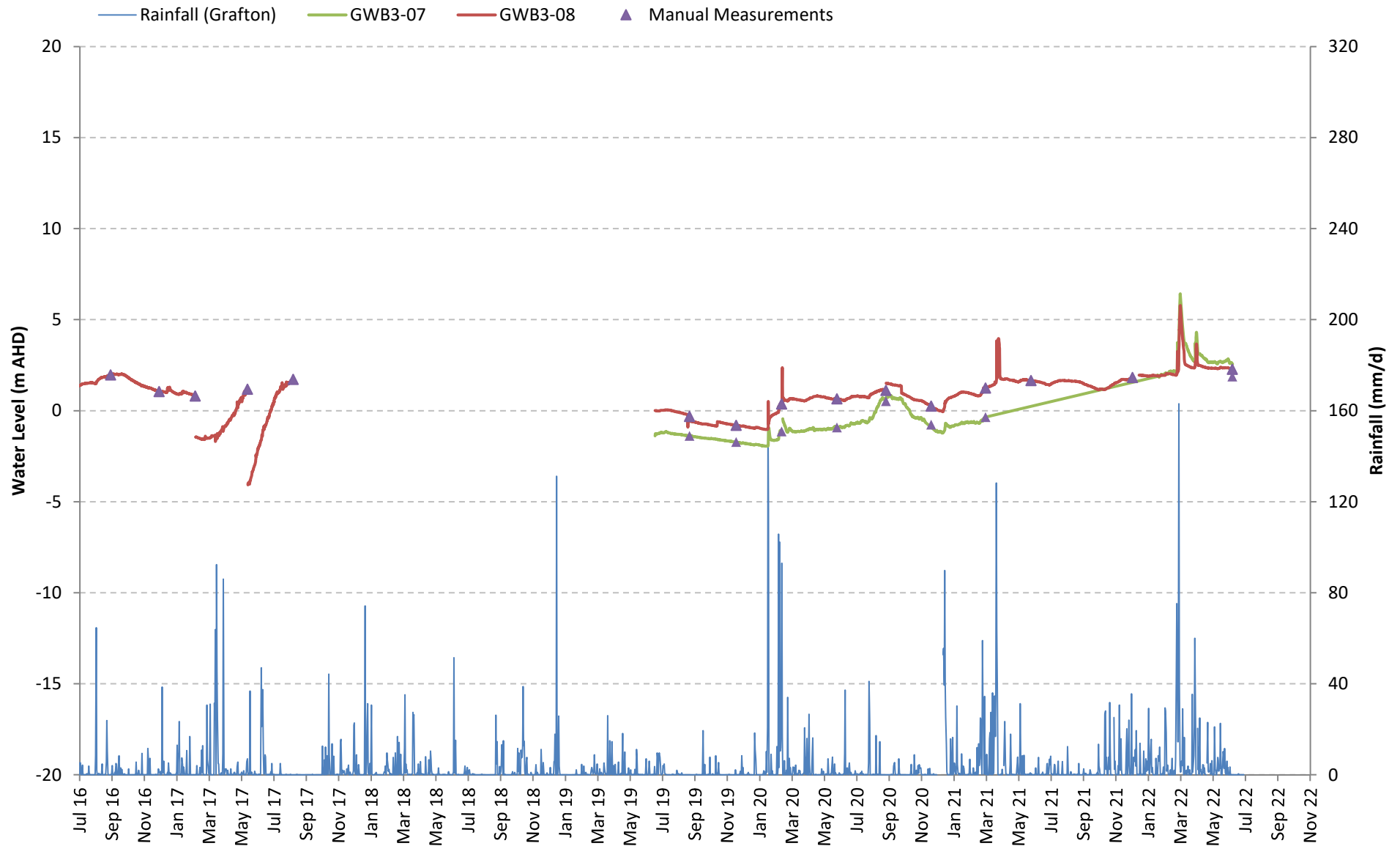
GWB3-01 Water Level



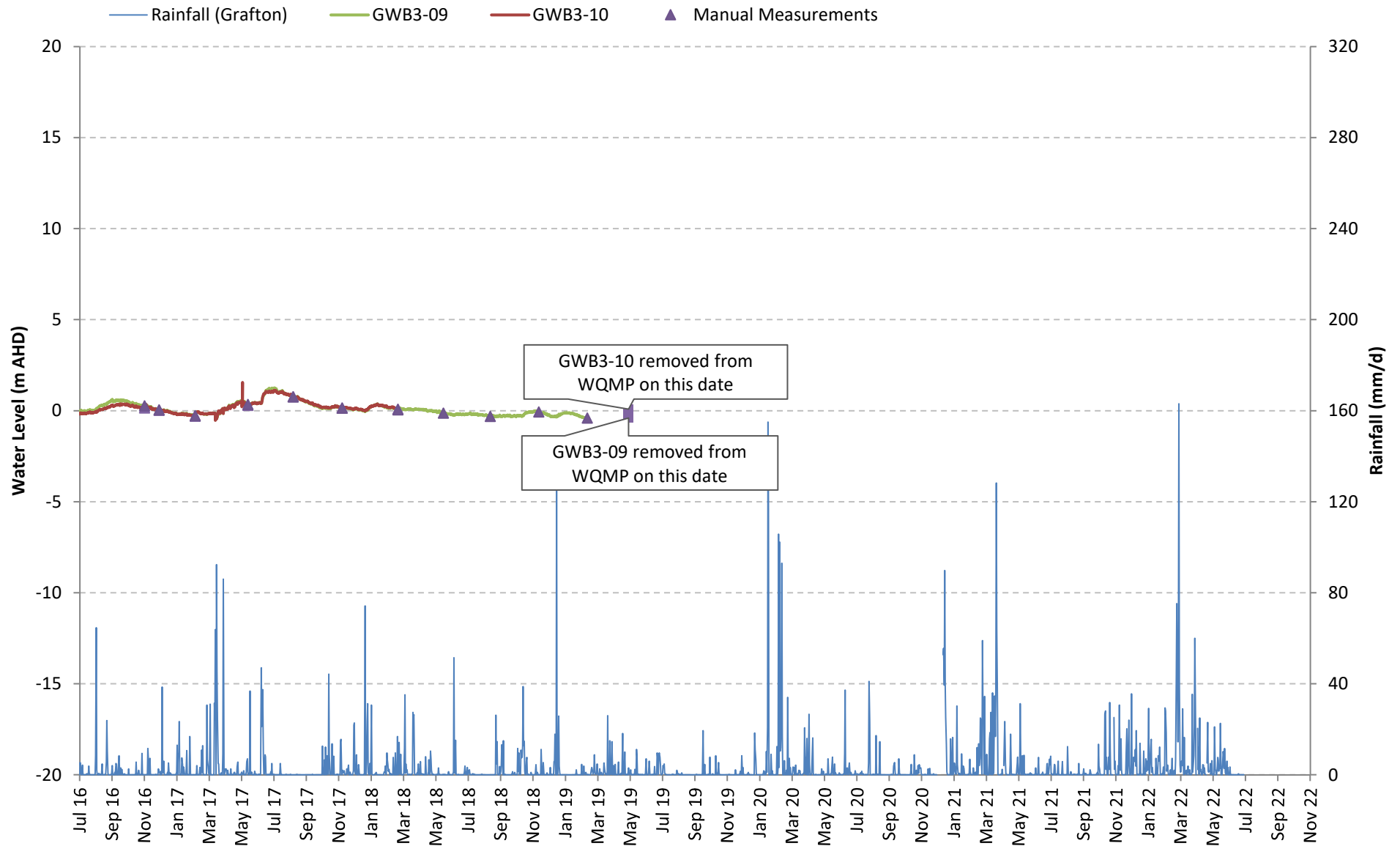
GWB3-05 & GWB3-06 Water Levels



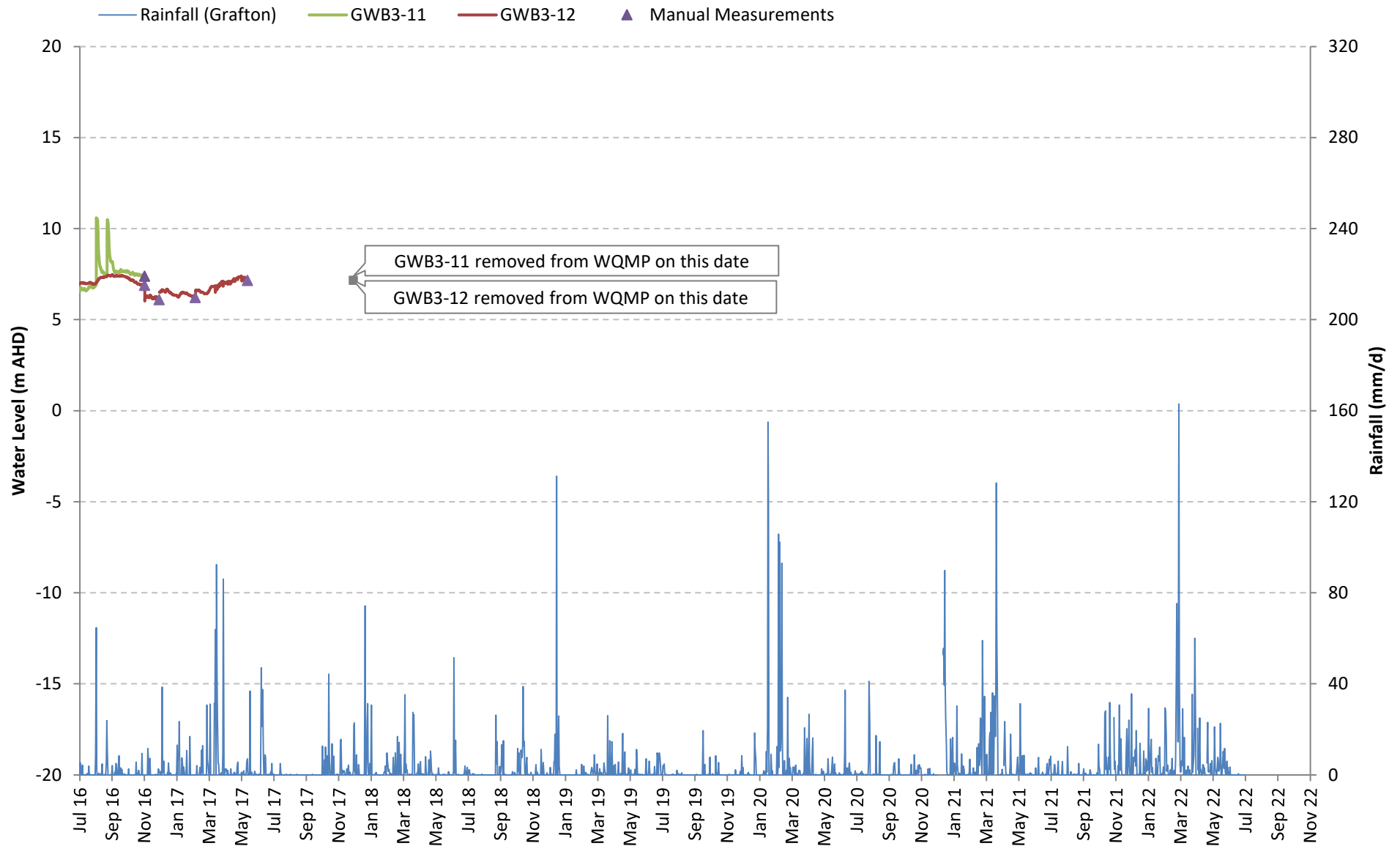
GWB3-07 & GWB3-08 Water Levels



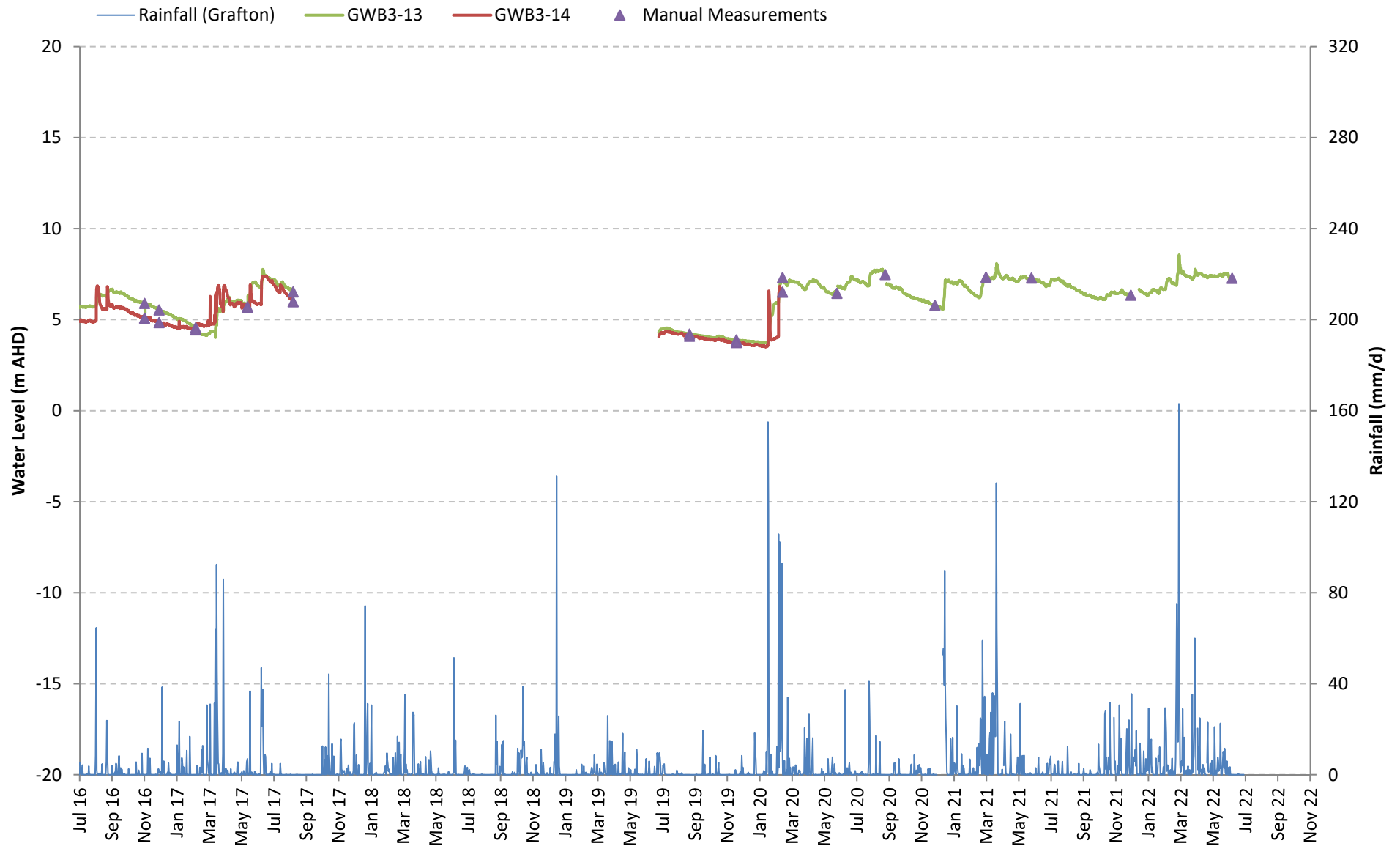
GWB3-09 & GWB3-10 Water Levels



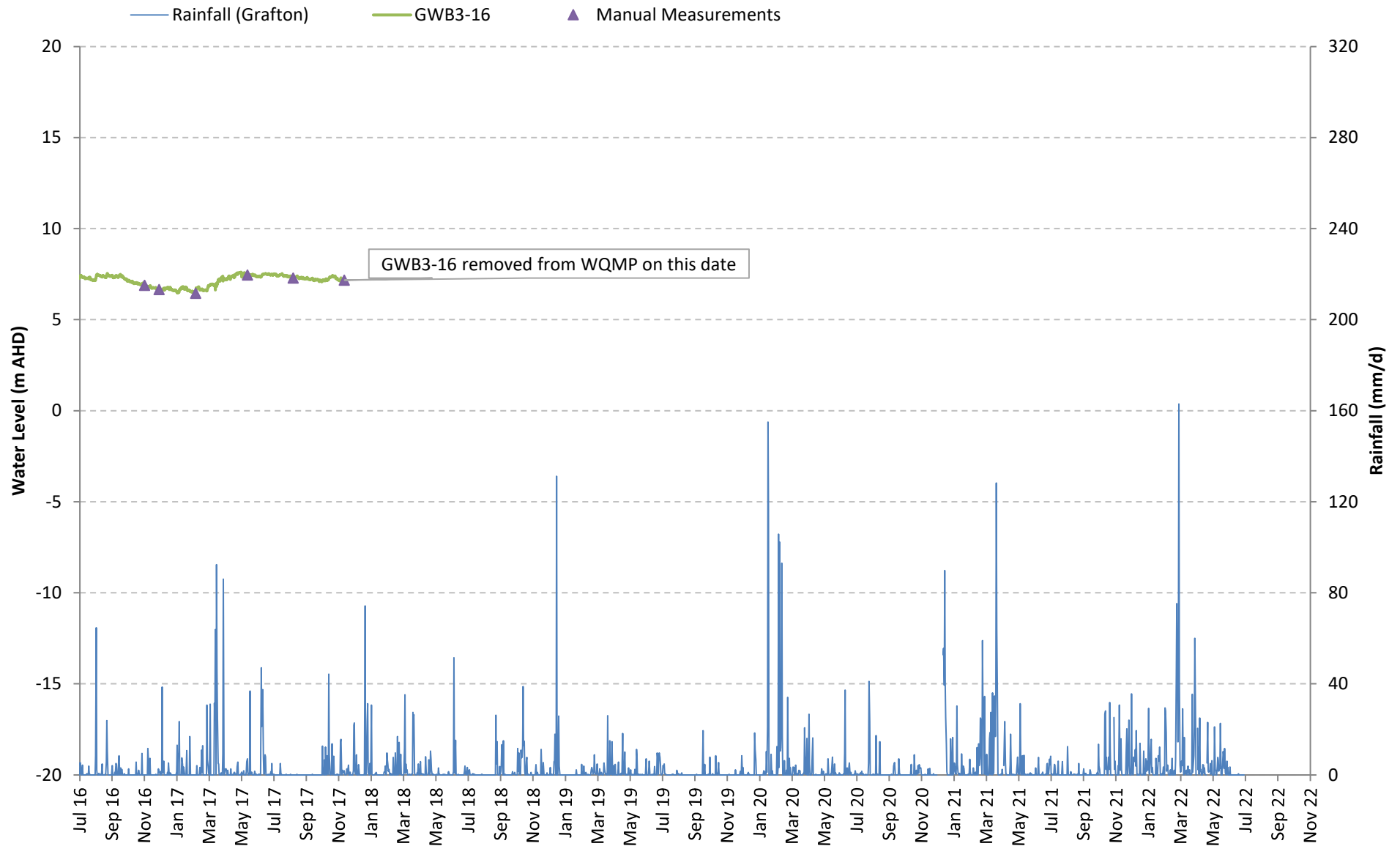
GWB3-11 & GWB3-12 Water Levels



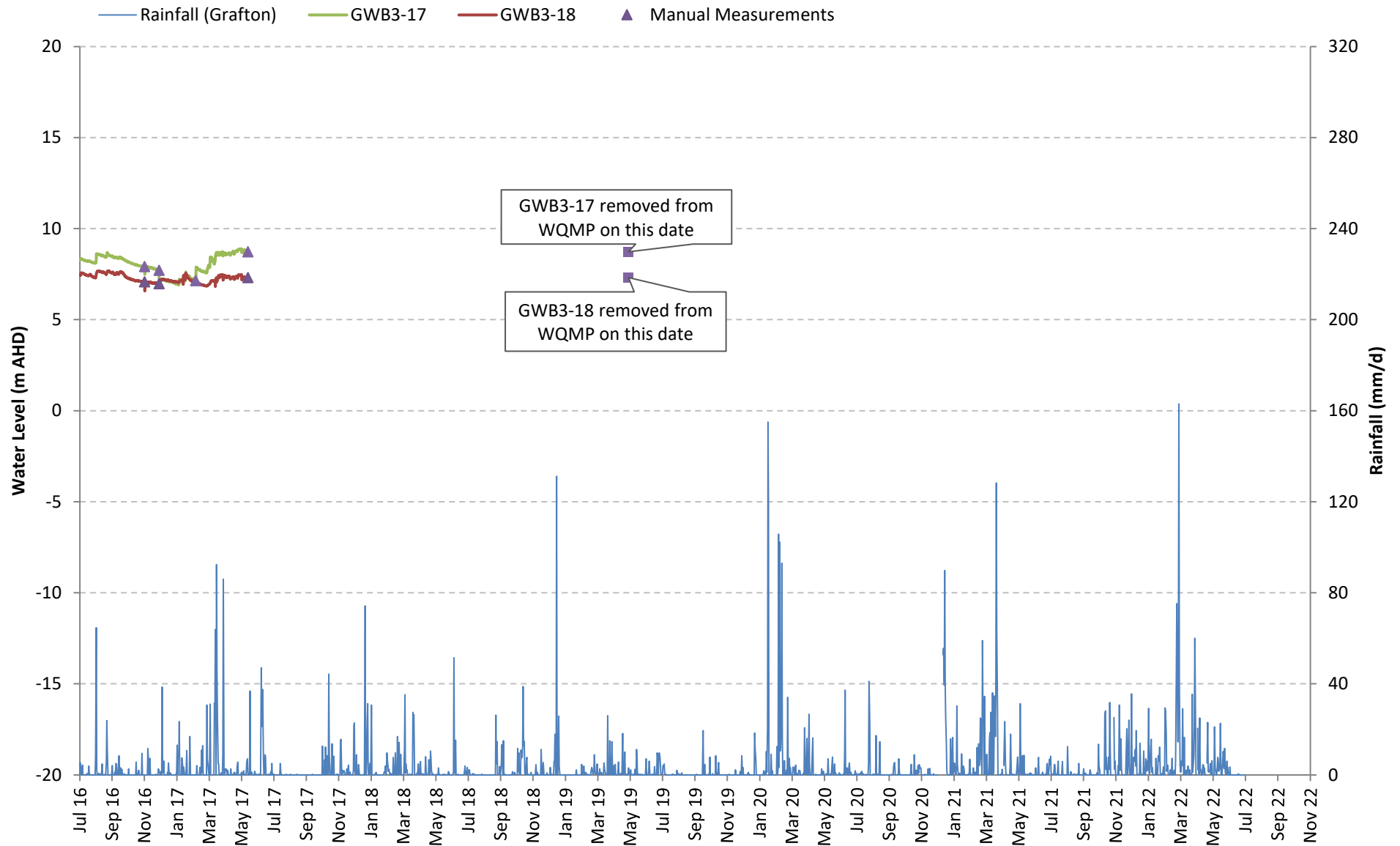
GWB3-13 & GWB3-14 Water Levels



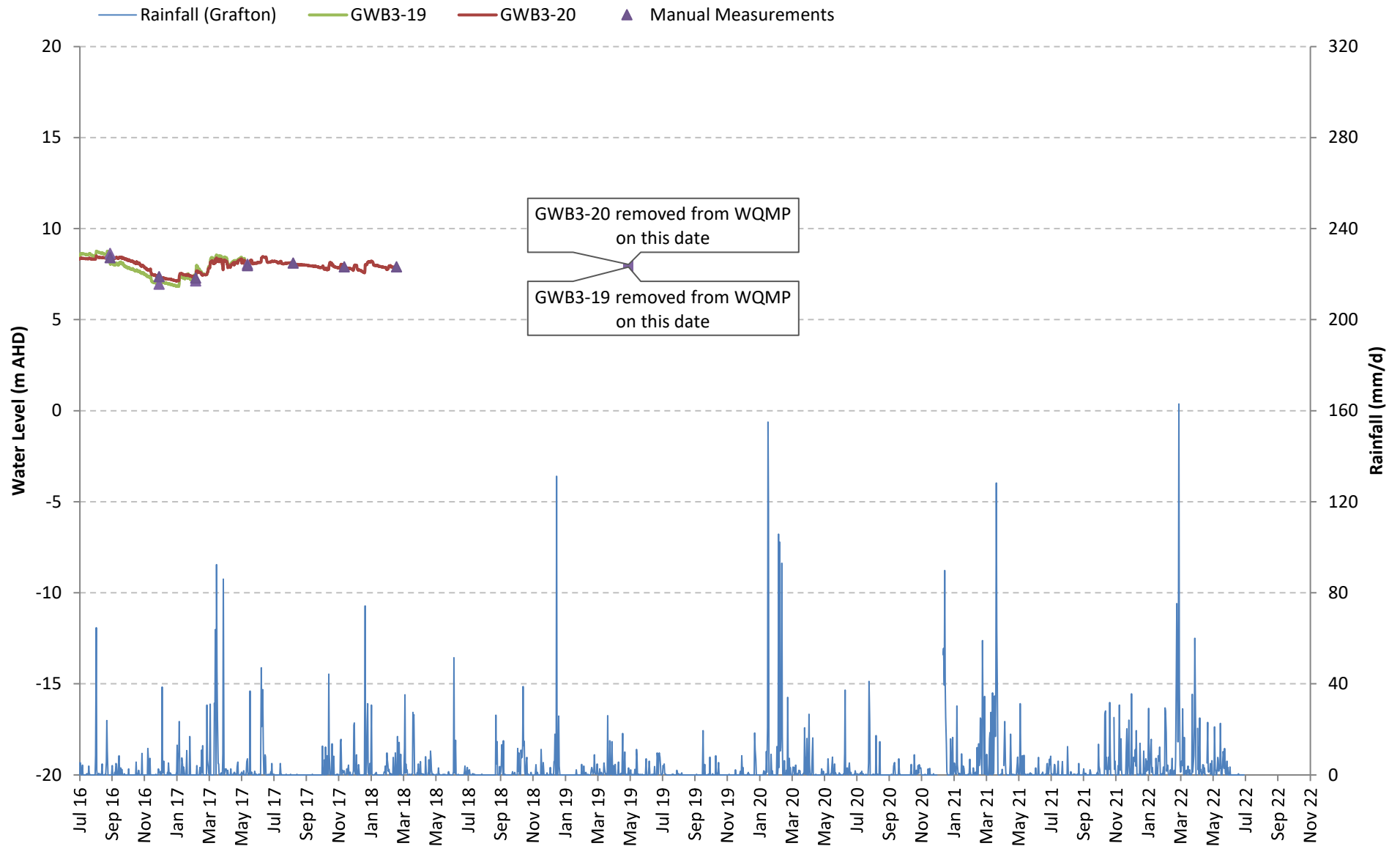
GWB3-16 Water Level



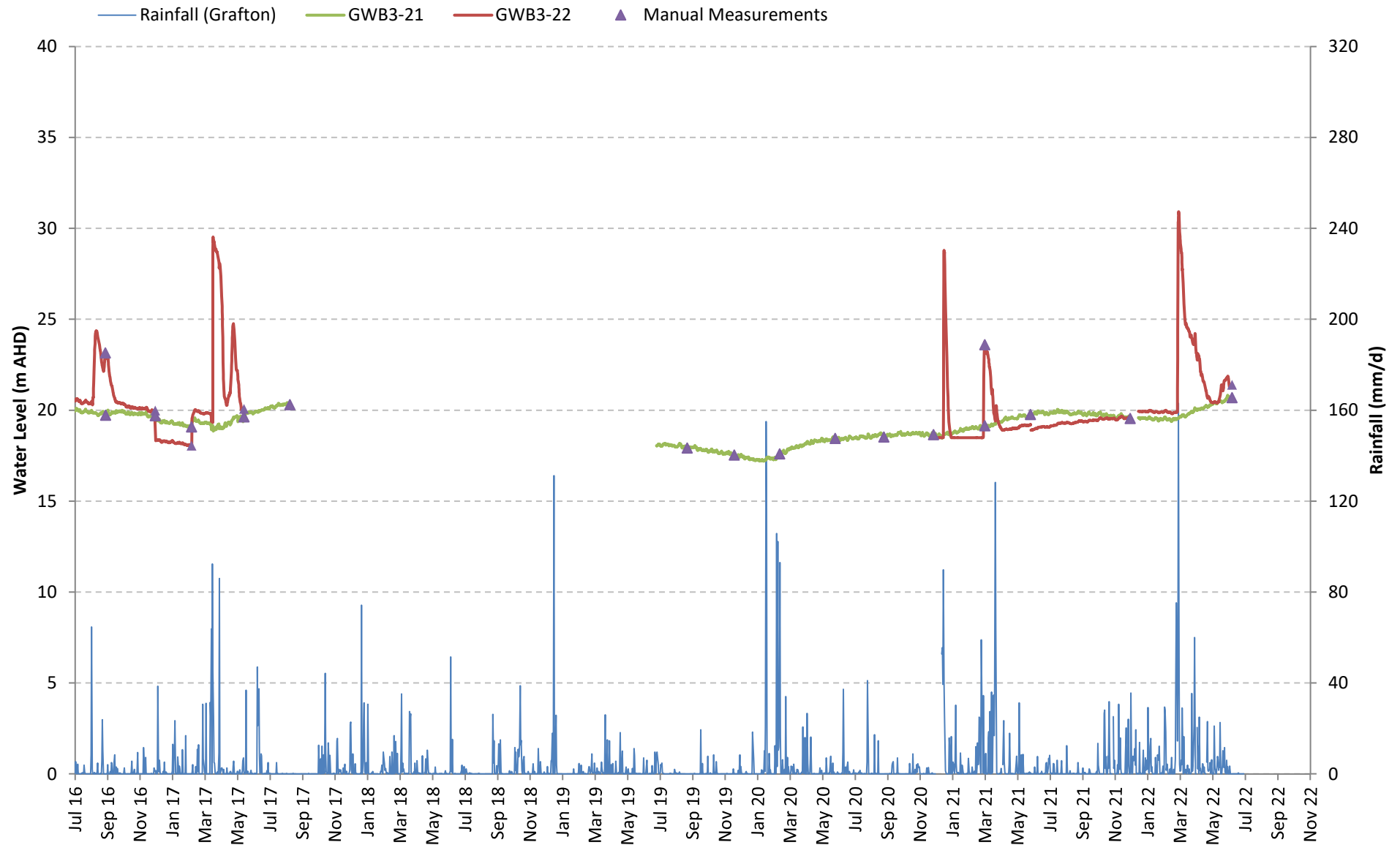
GWB3-17 & GWB3-18 Water Levels



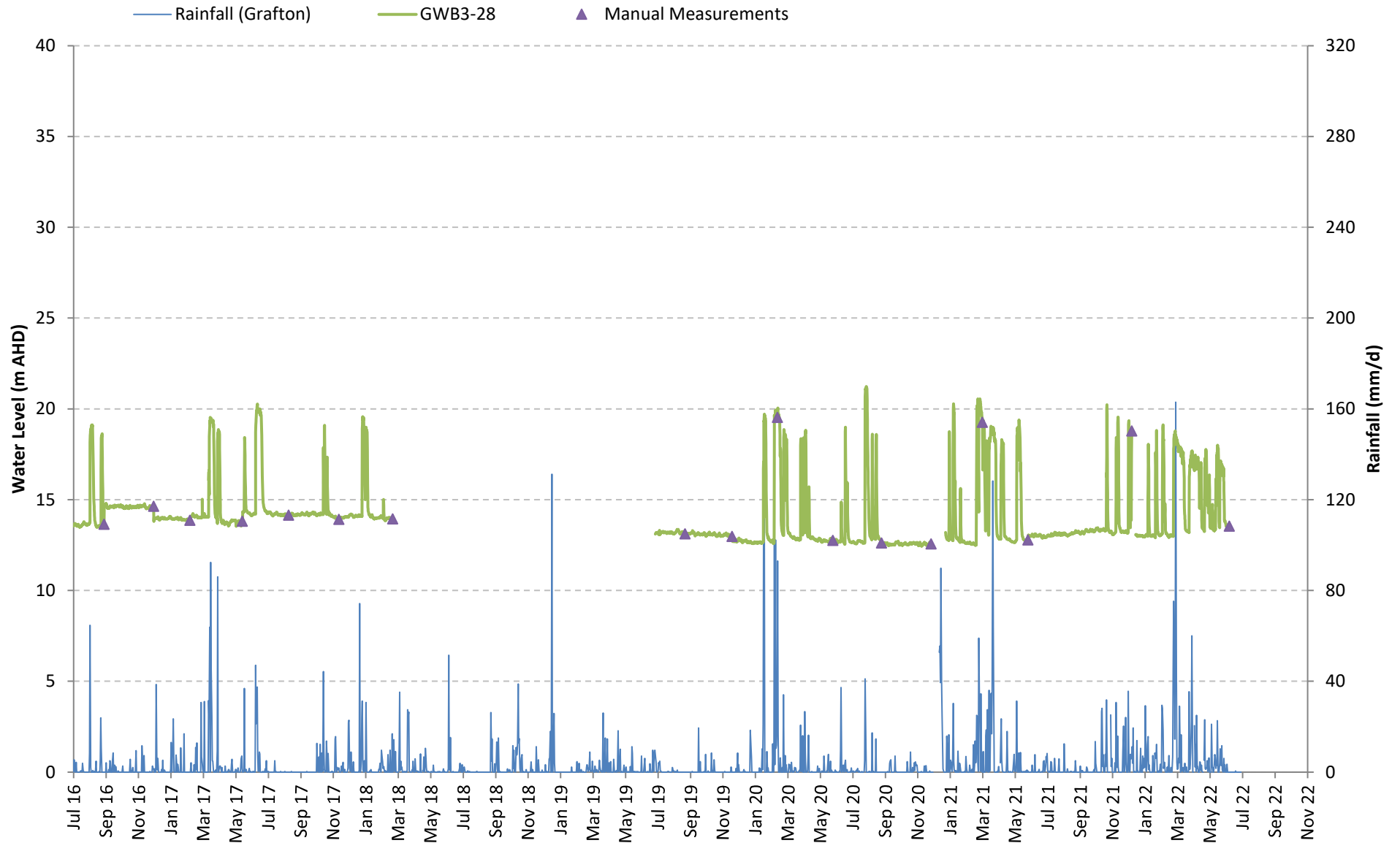
GWB3-19 & GWB3-20 Water Levels



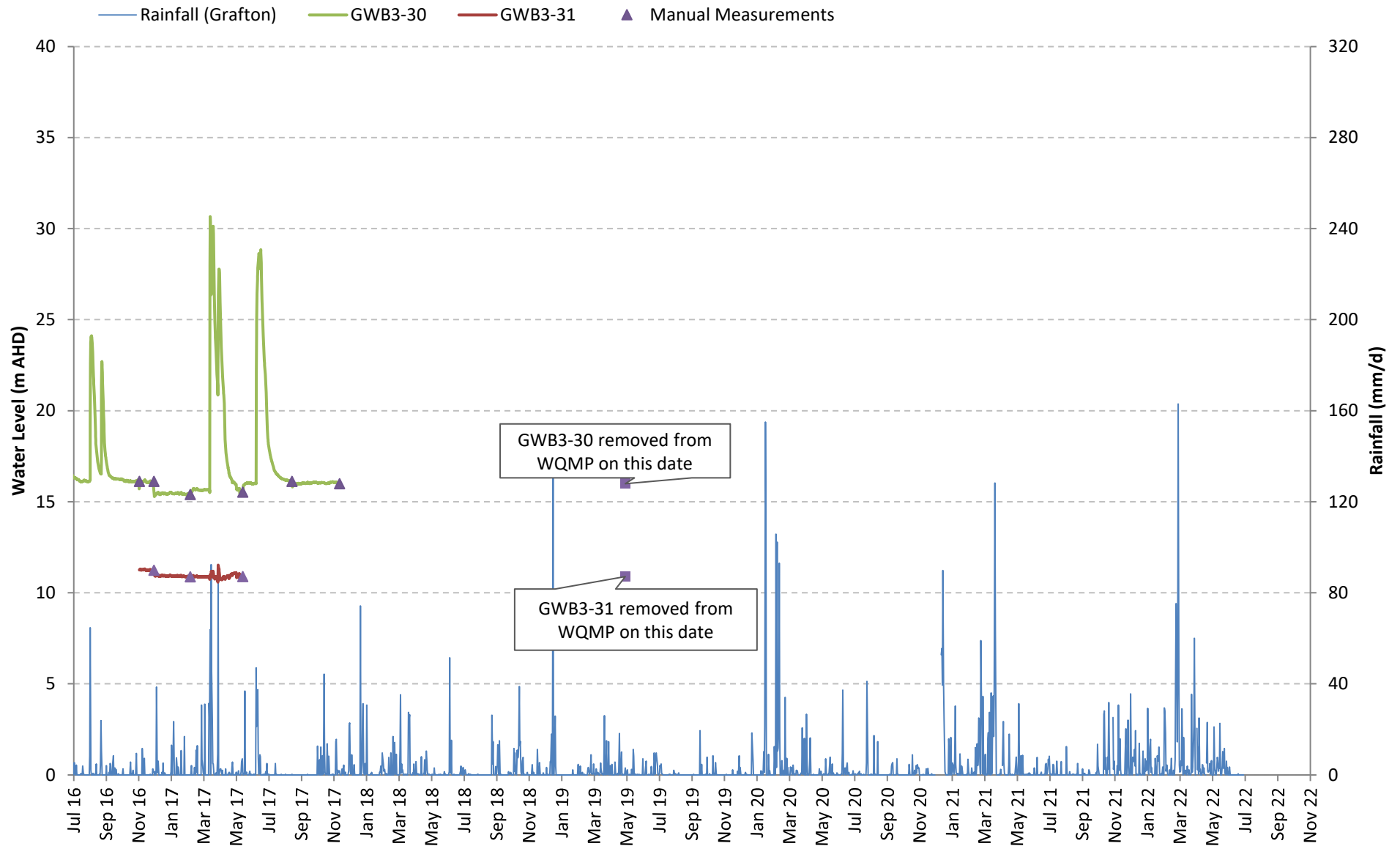
GWB3-21 & GWB3-22 Water Levels



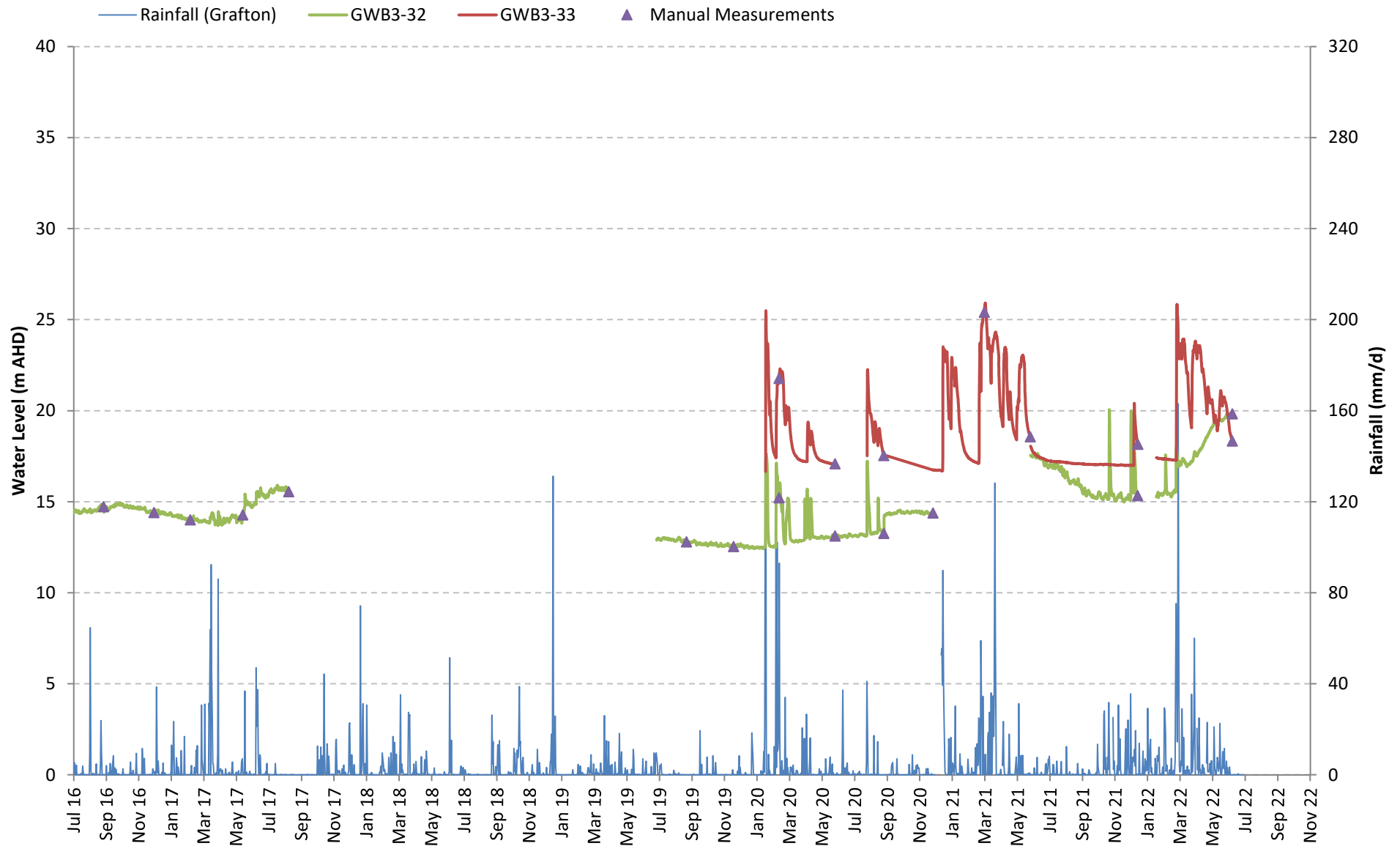
GWB3-28 Water Level



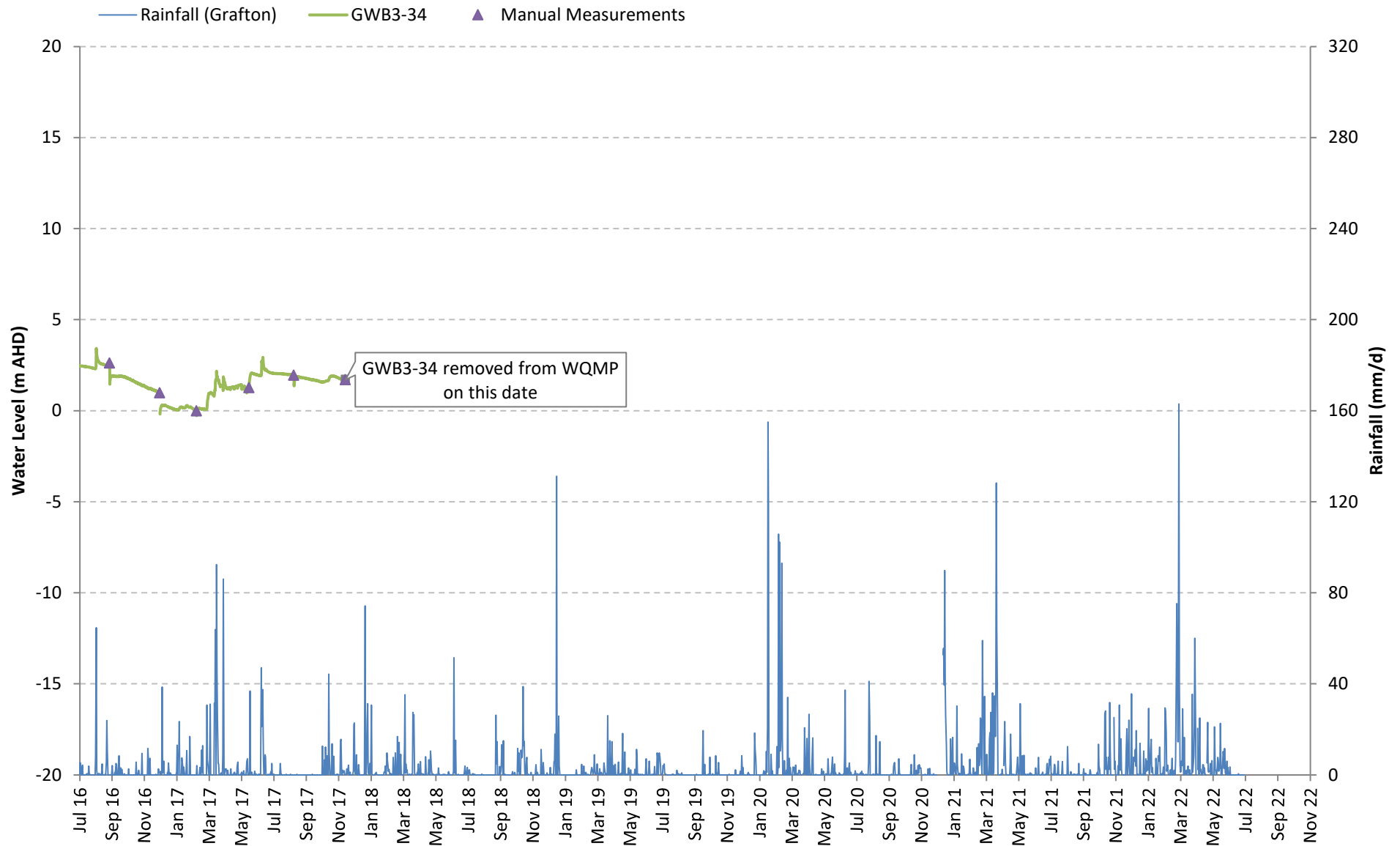
GWB3-30 & GWB3-31 Water Levels



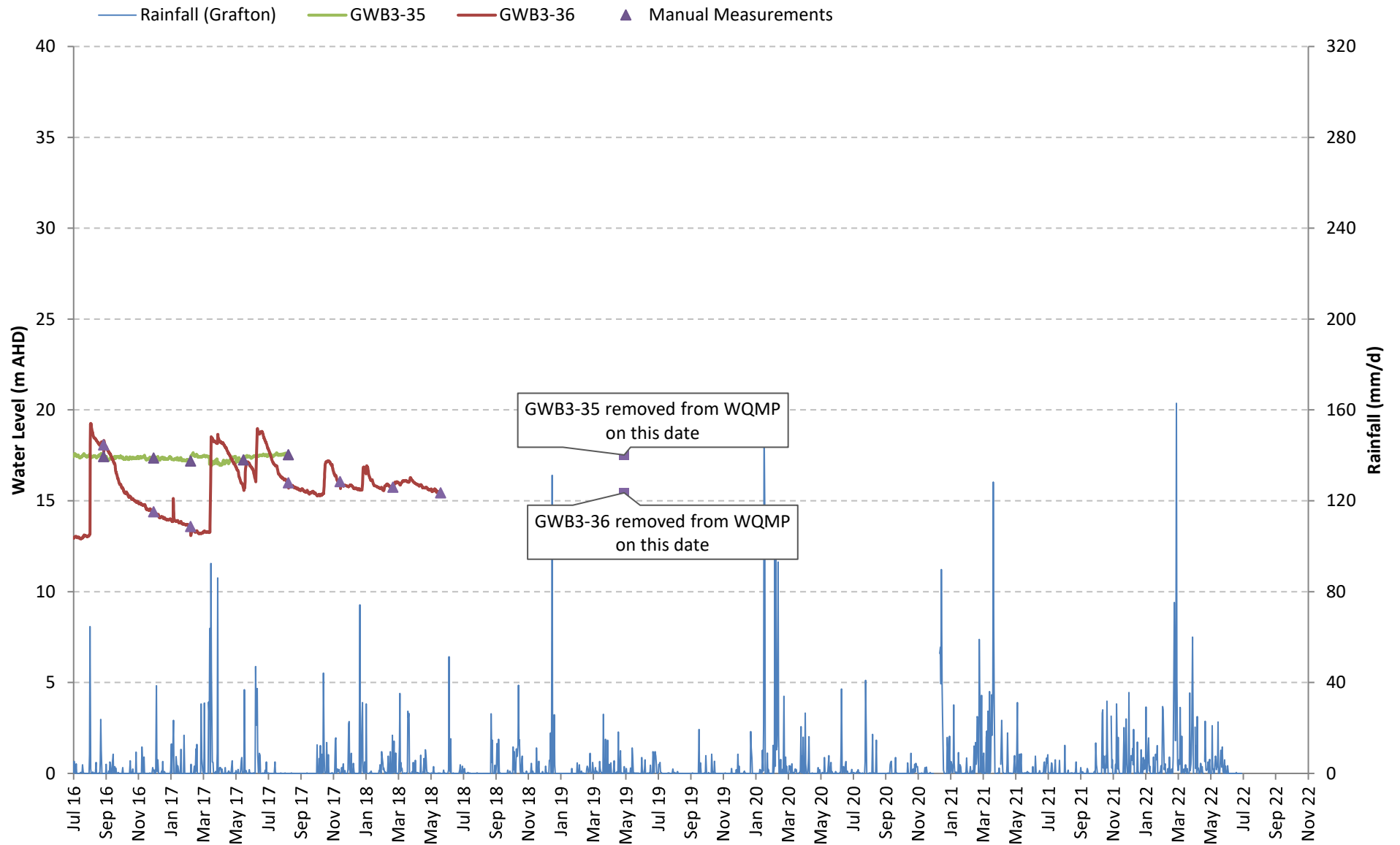
GWB3-32 & GWB3-33 Water Levels



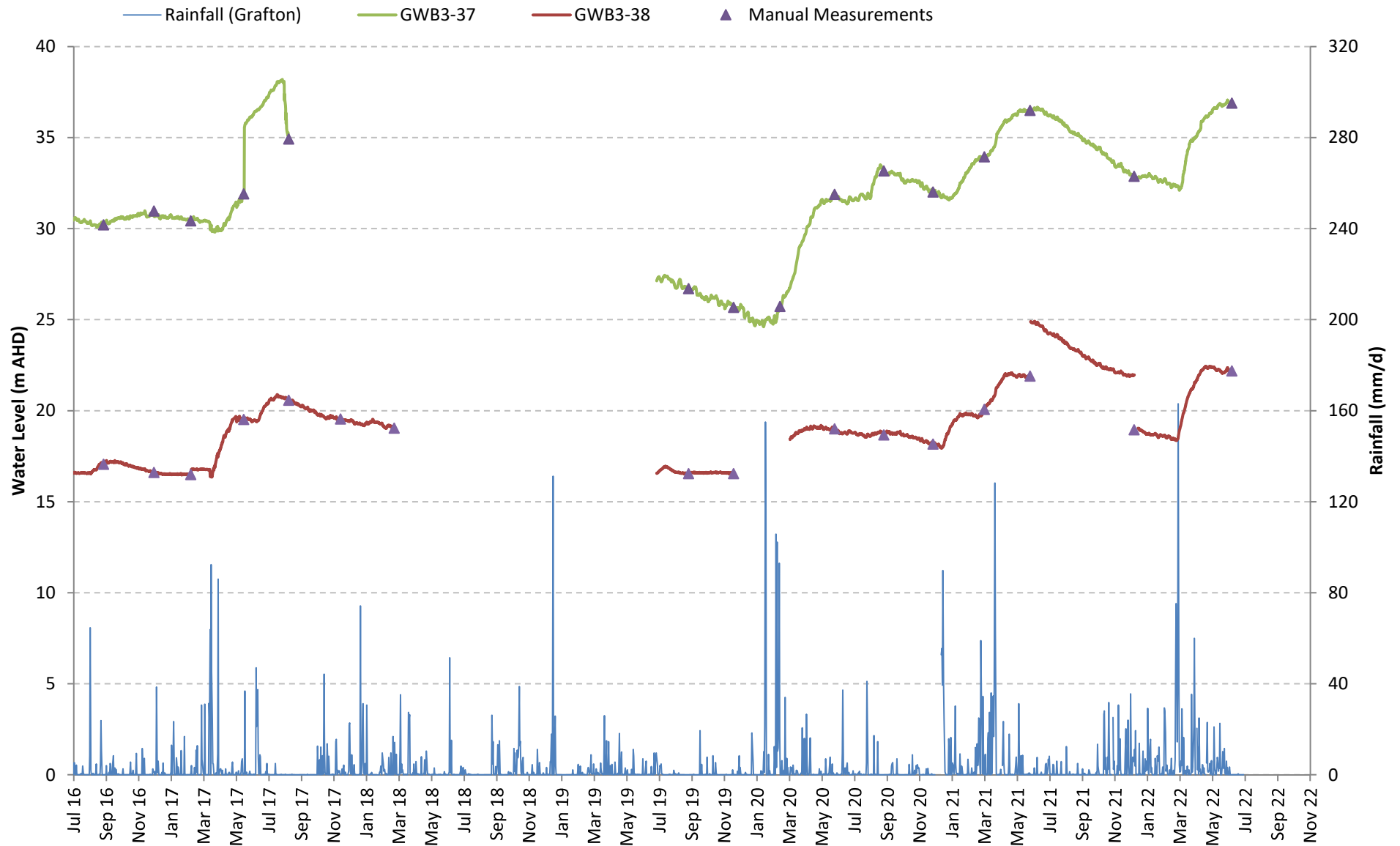
GWB3-34 Water Level



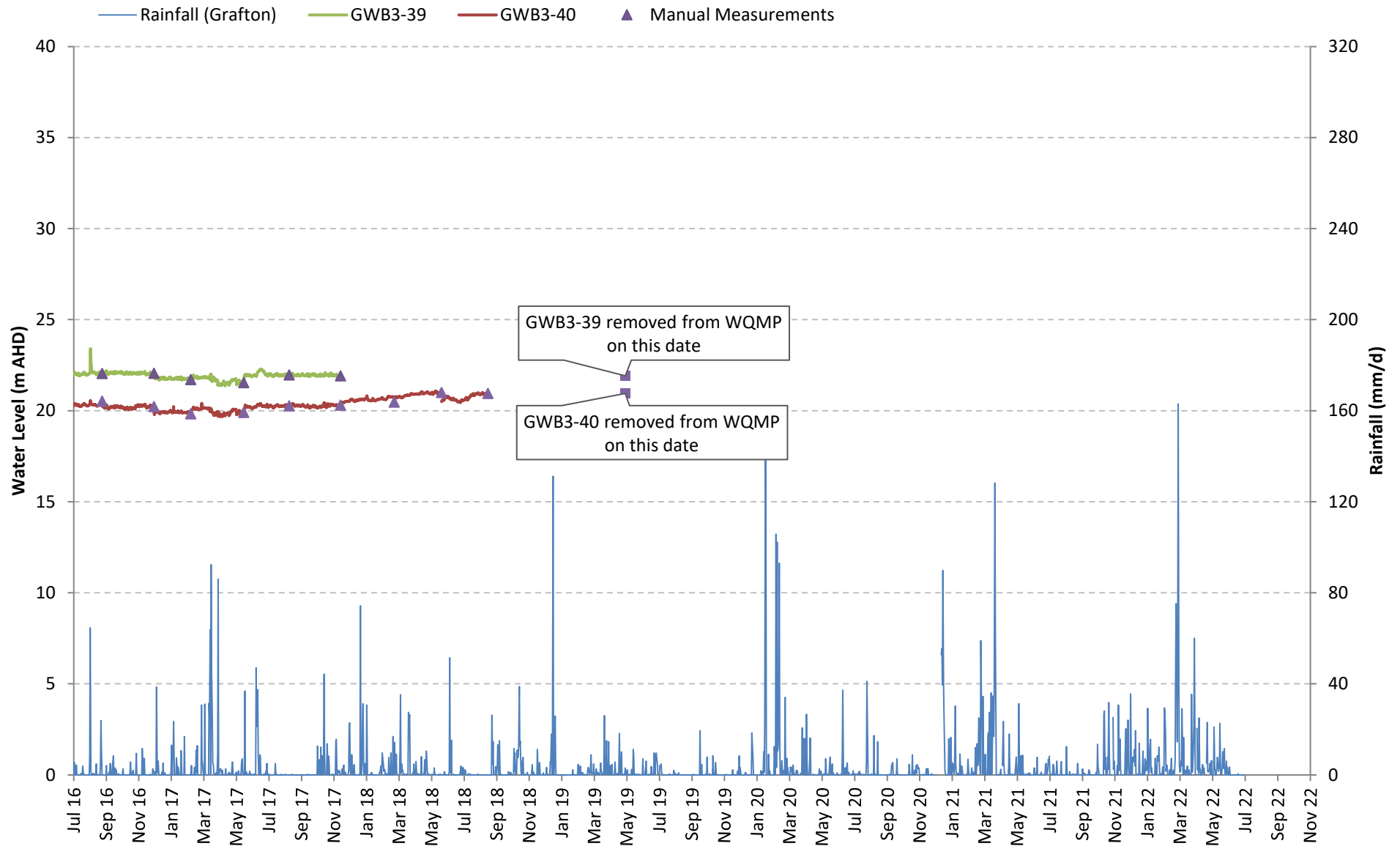
GWB3-35 & GWB3-36 Water Levels



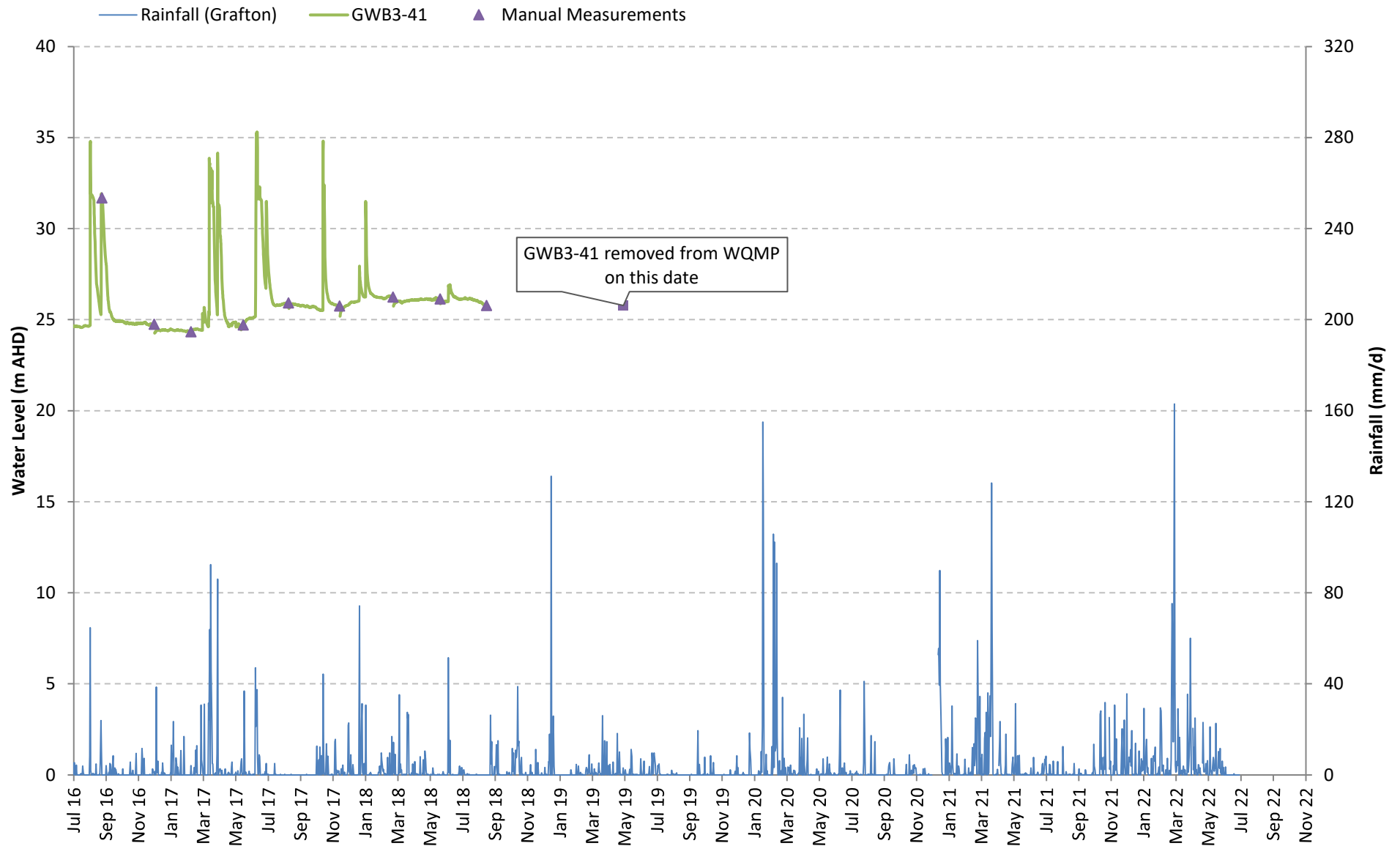
GWB3-37 & GWB3-38 Water Levels



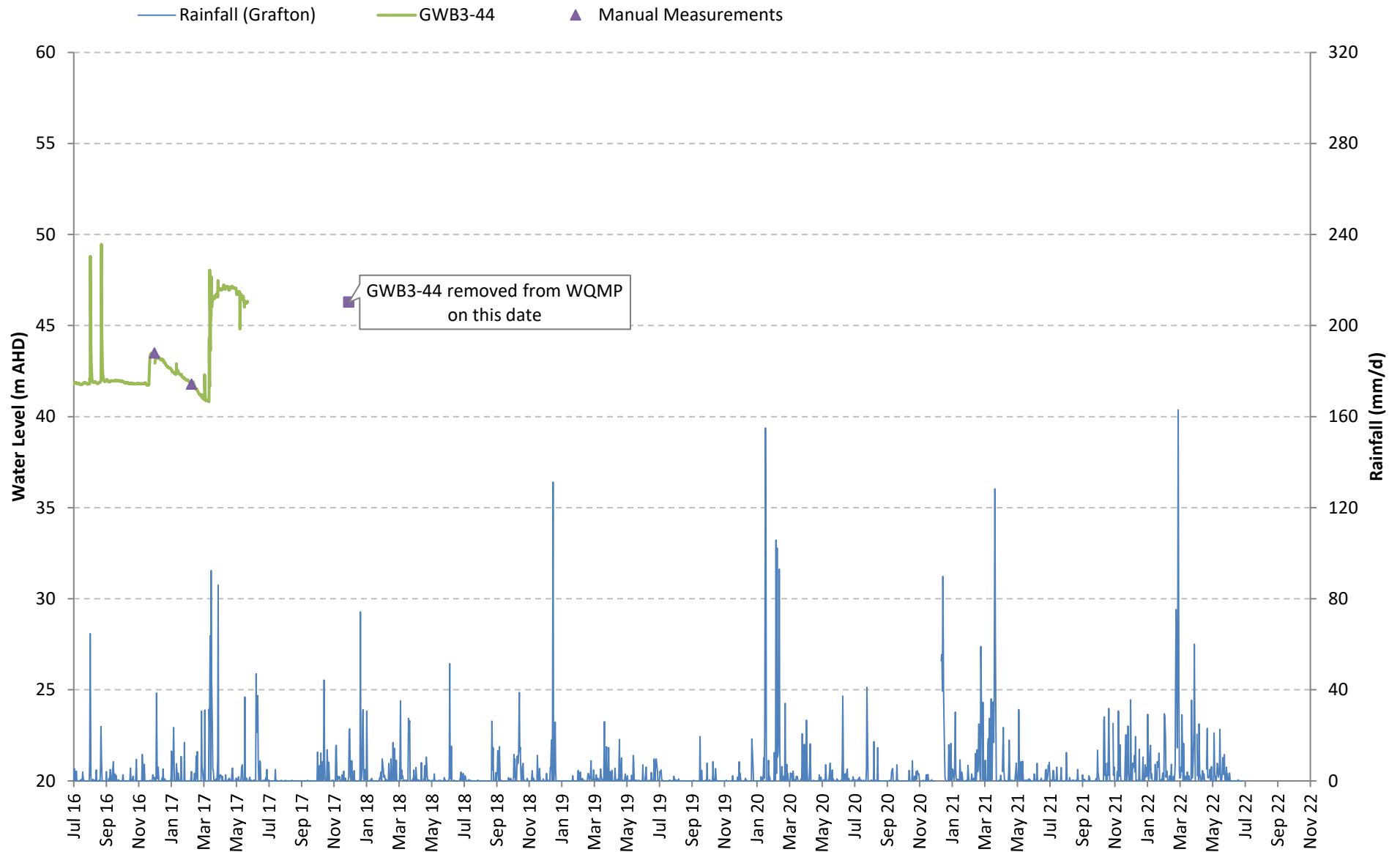
GWB3-39 & GWB3-40 Water Levels



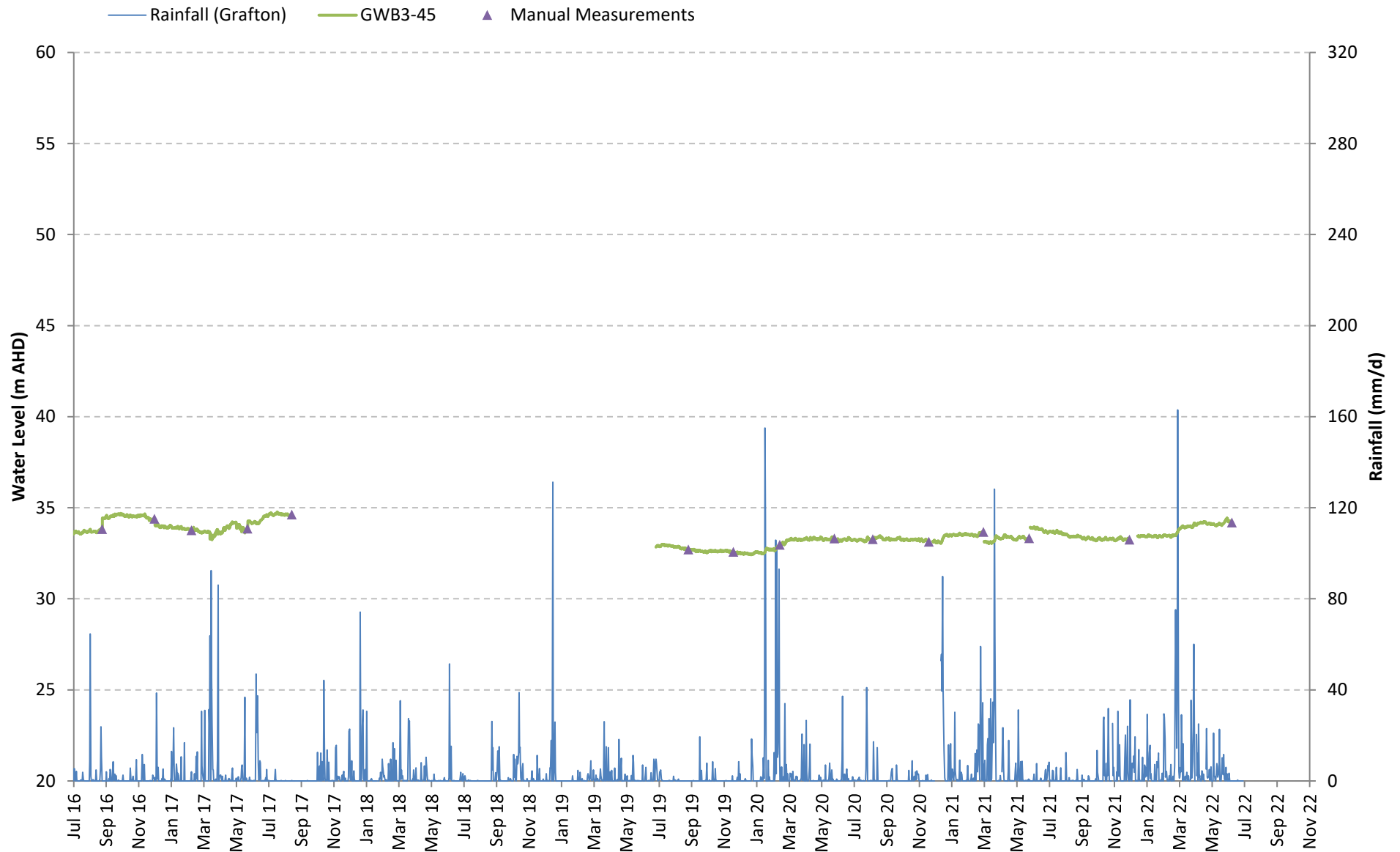
GWB3-41 Water Level



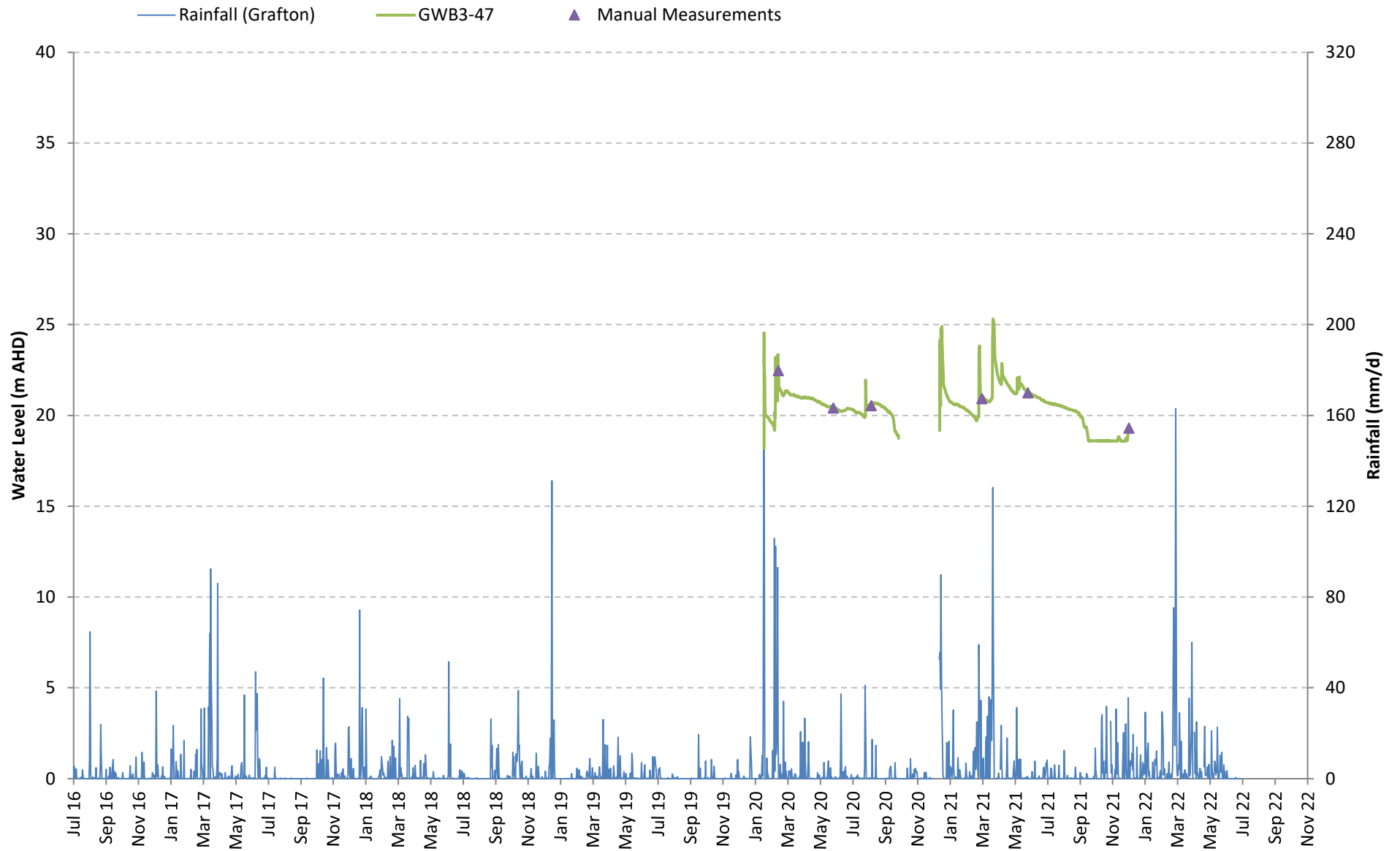
GWB3-44 Water Level



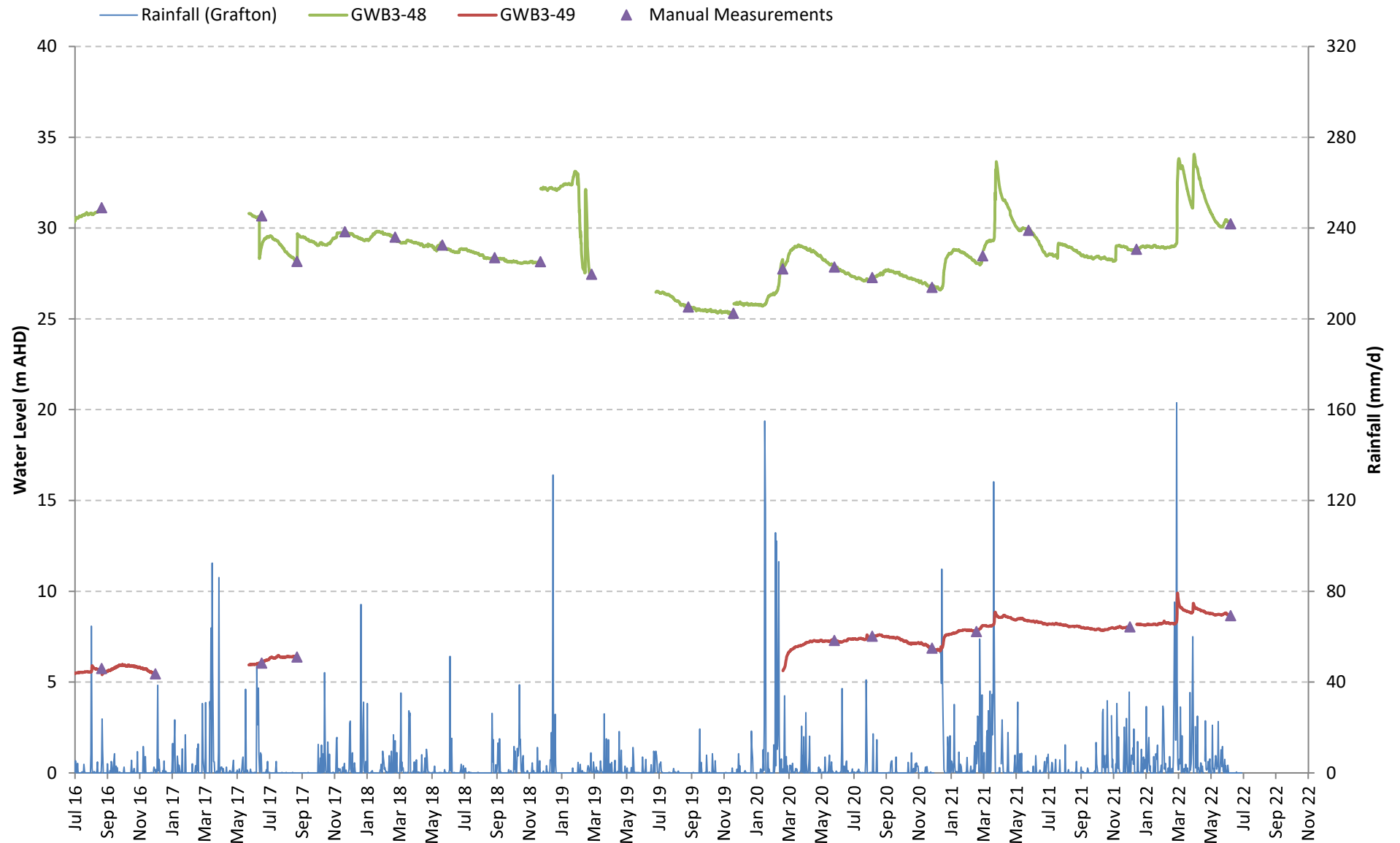
GWB3-45 Water Level



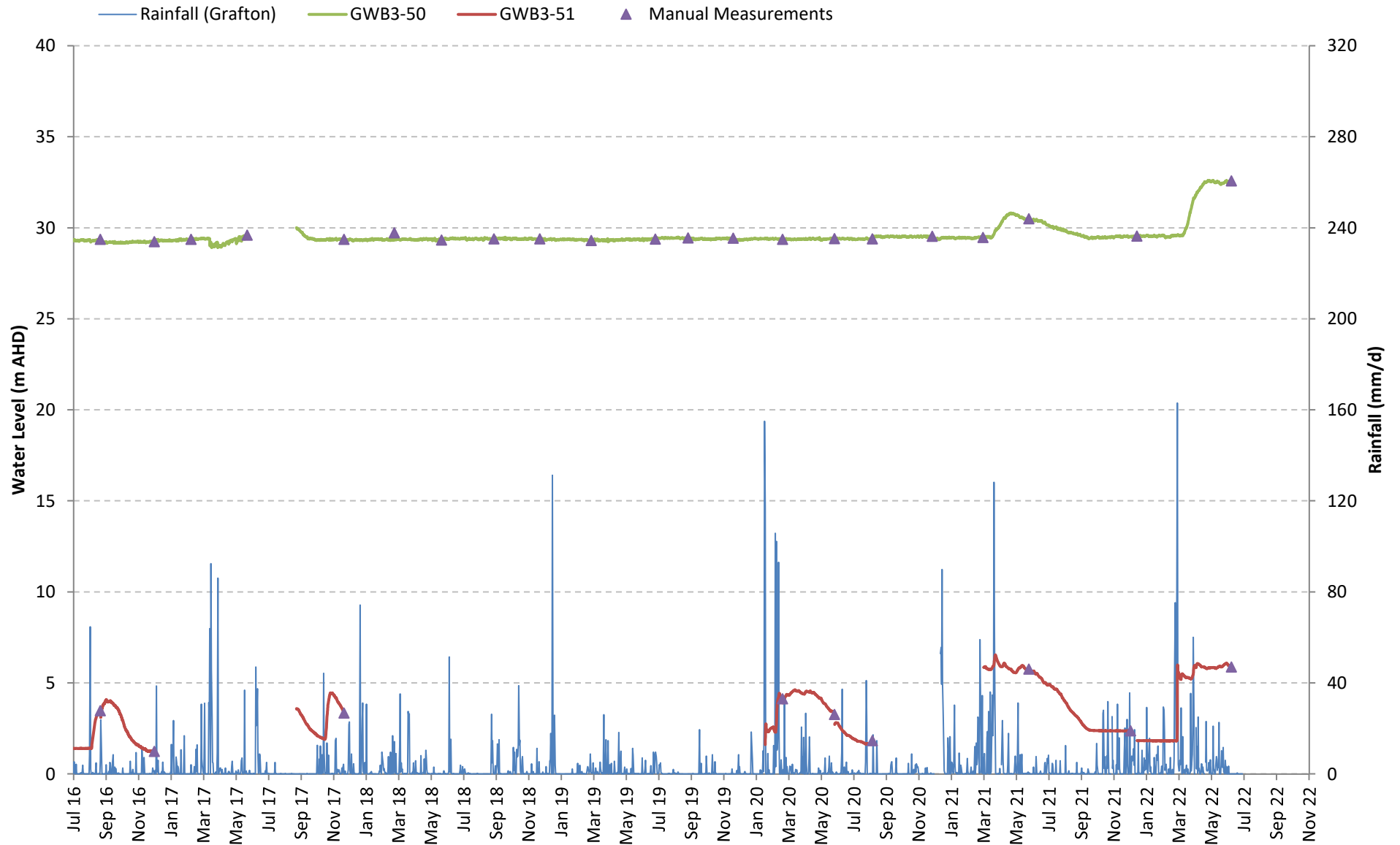
GWB3-47 Water Level



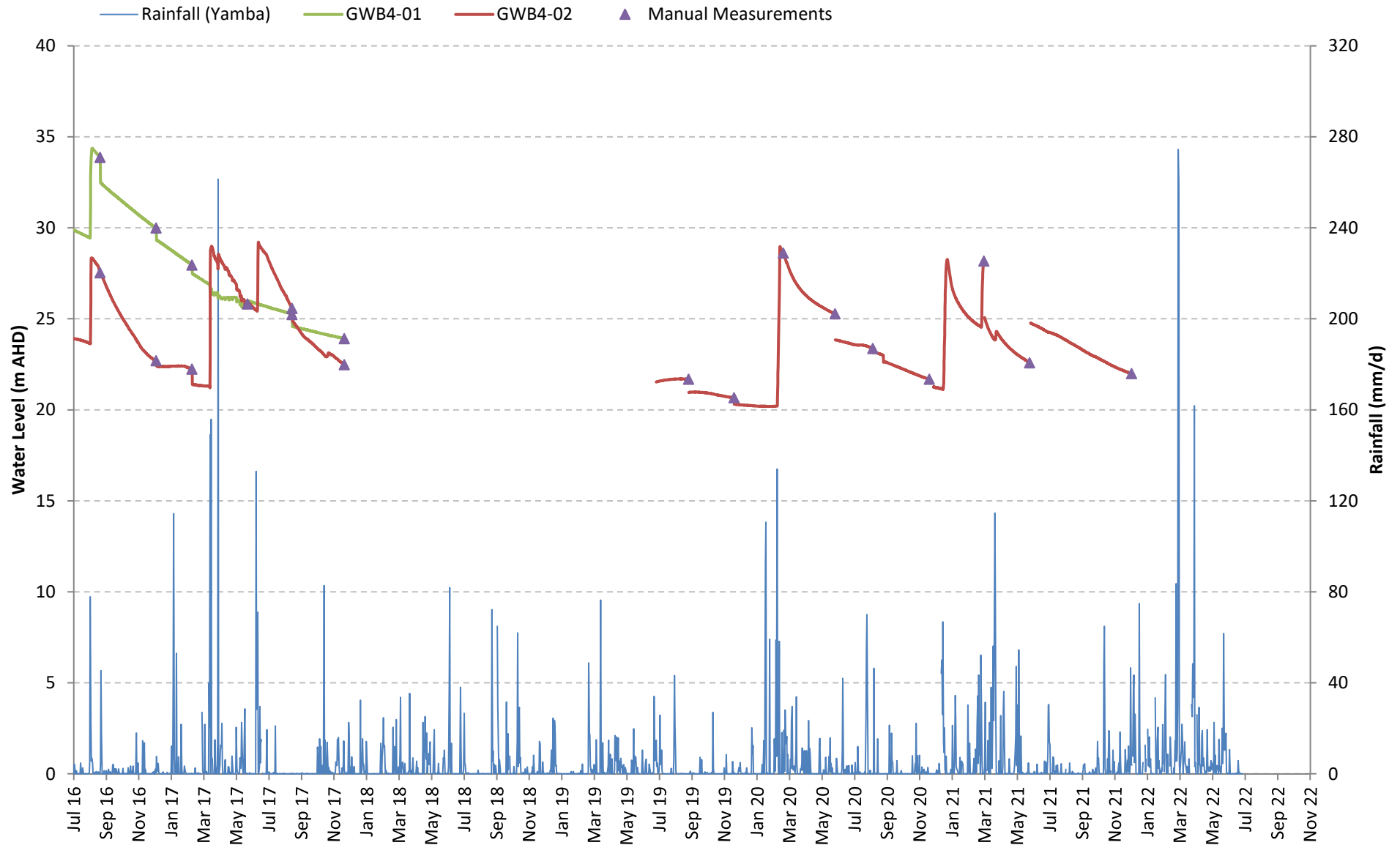
GWB3-48 & GWB3-49 Water Levels



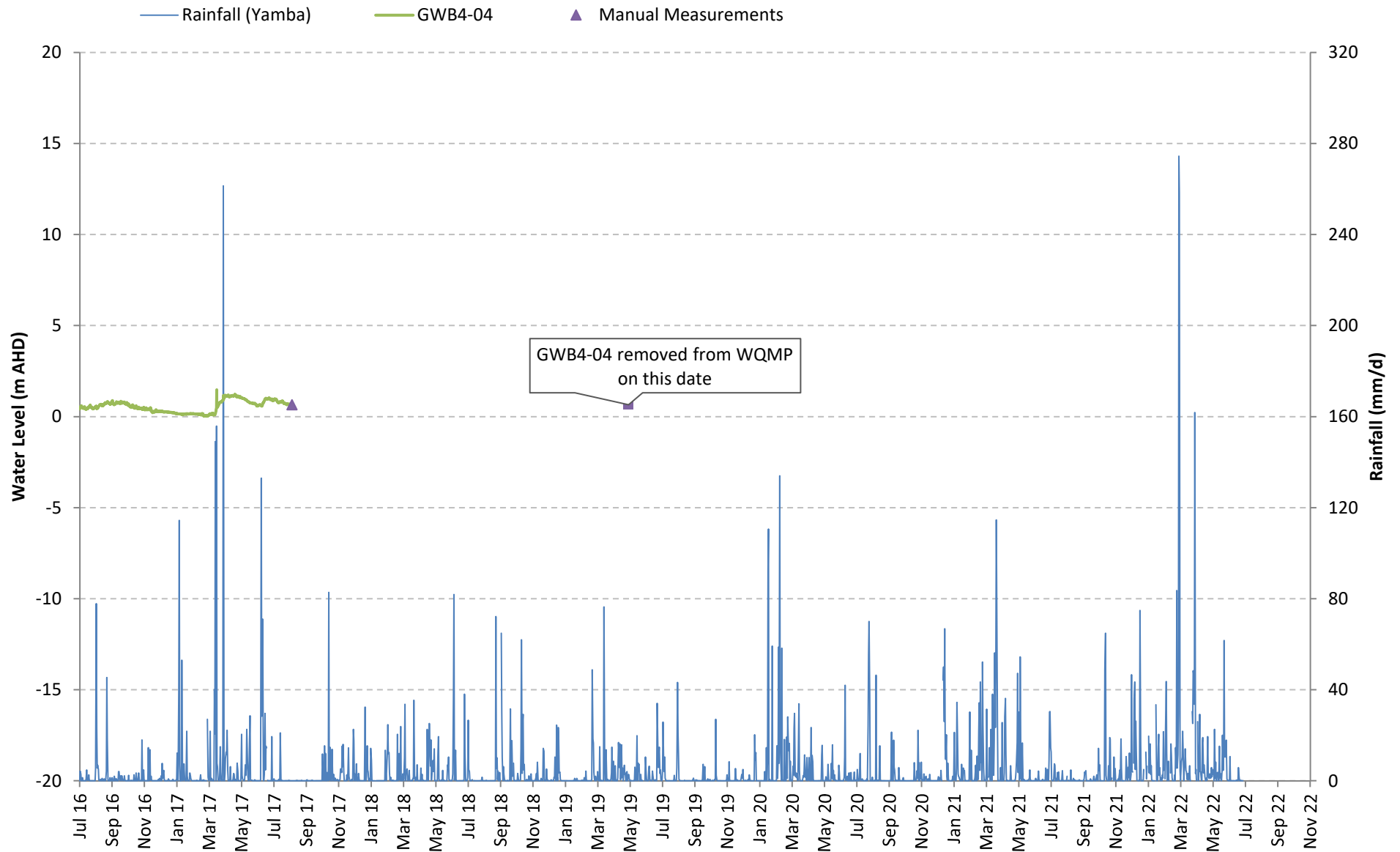
GWB3-50 & GWB3-51 Water Levels



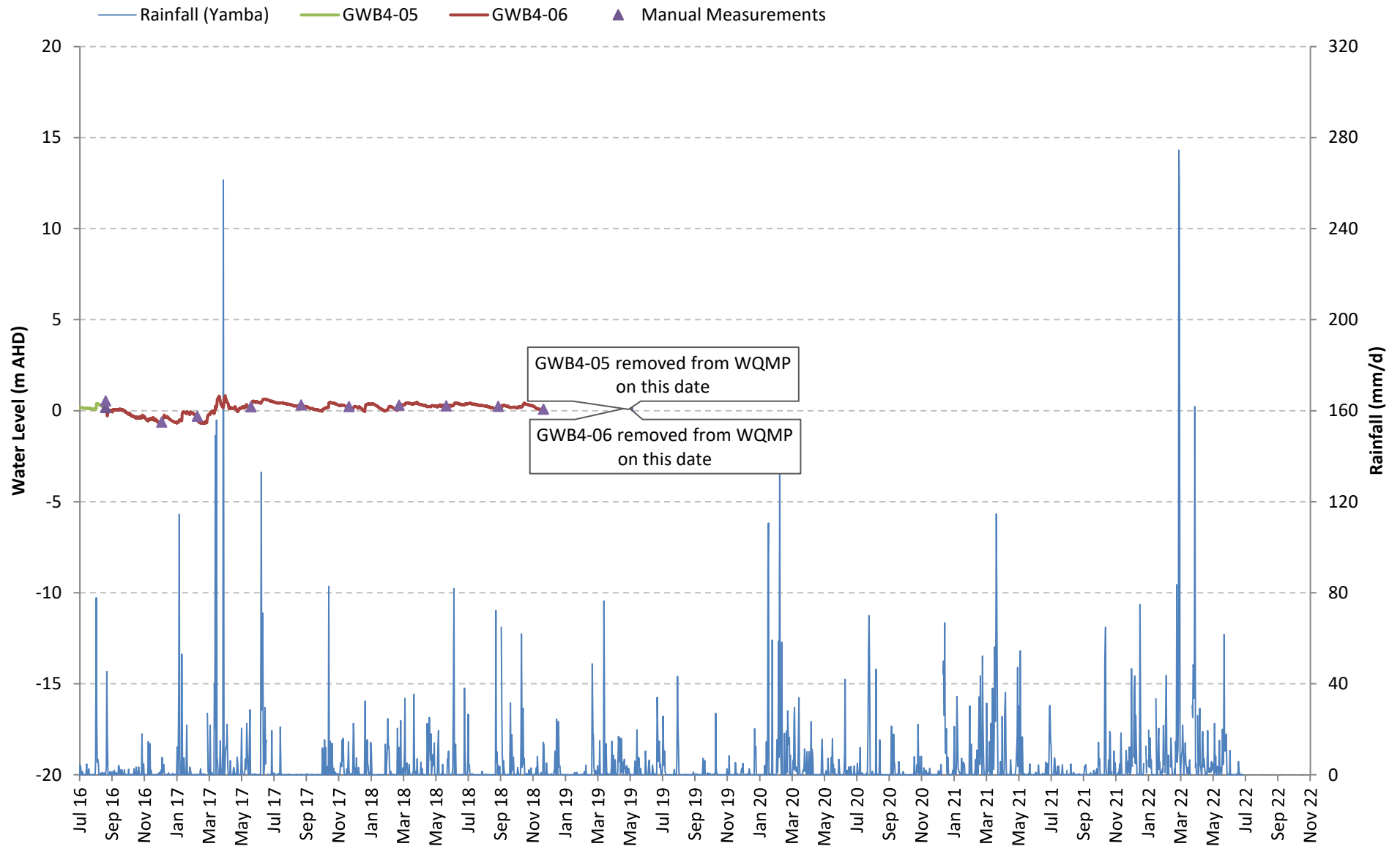
GWB4-01 & GWB4-02 Water Levels



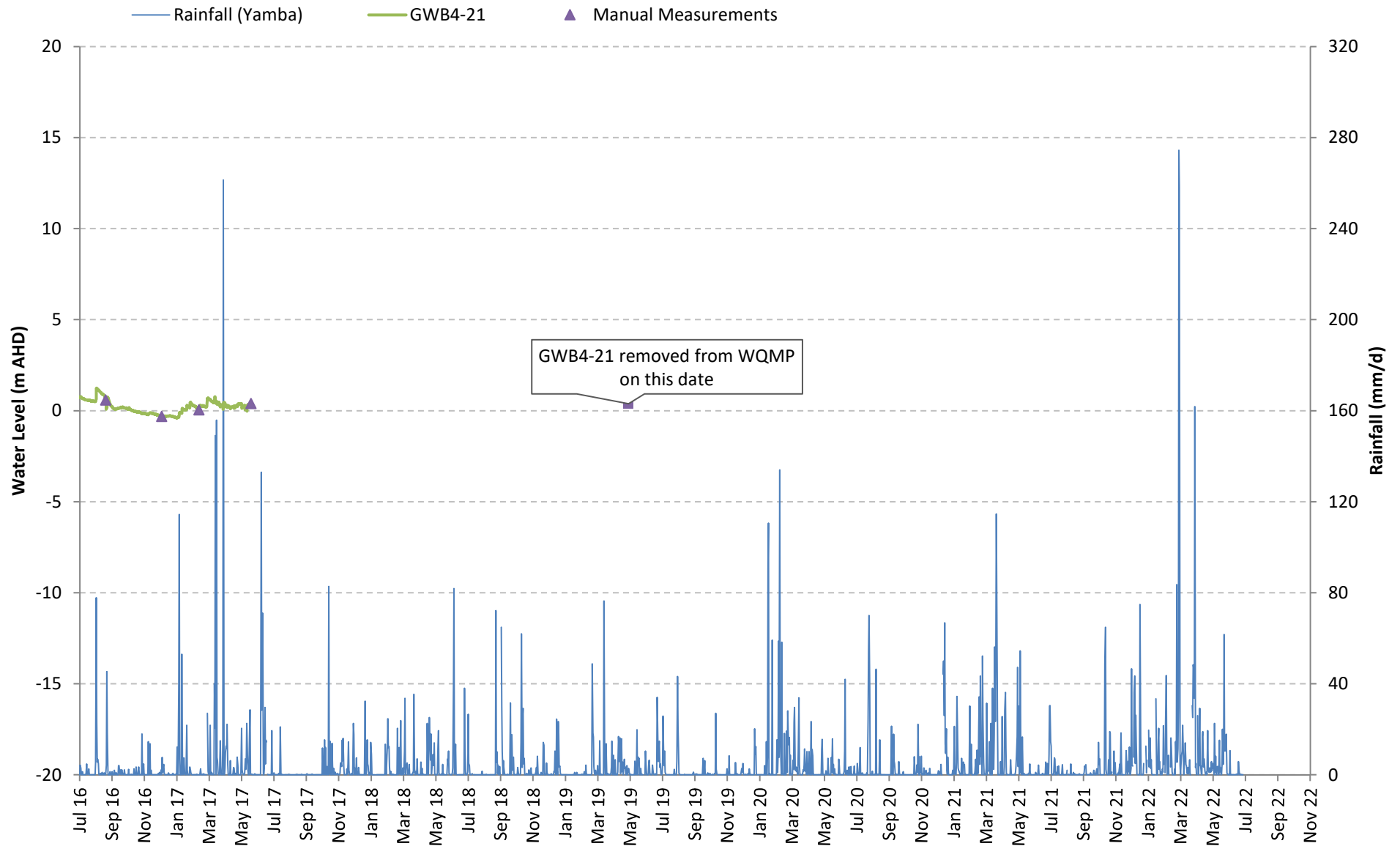
GWB4-04 Water Level



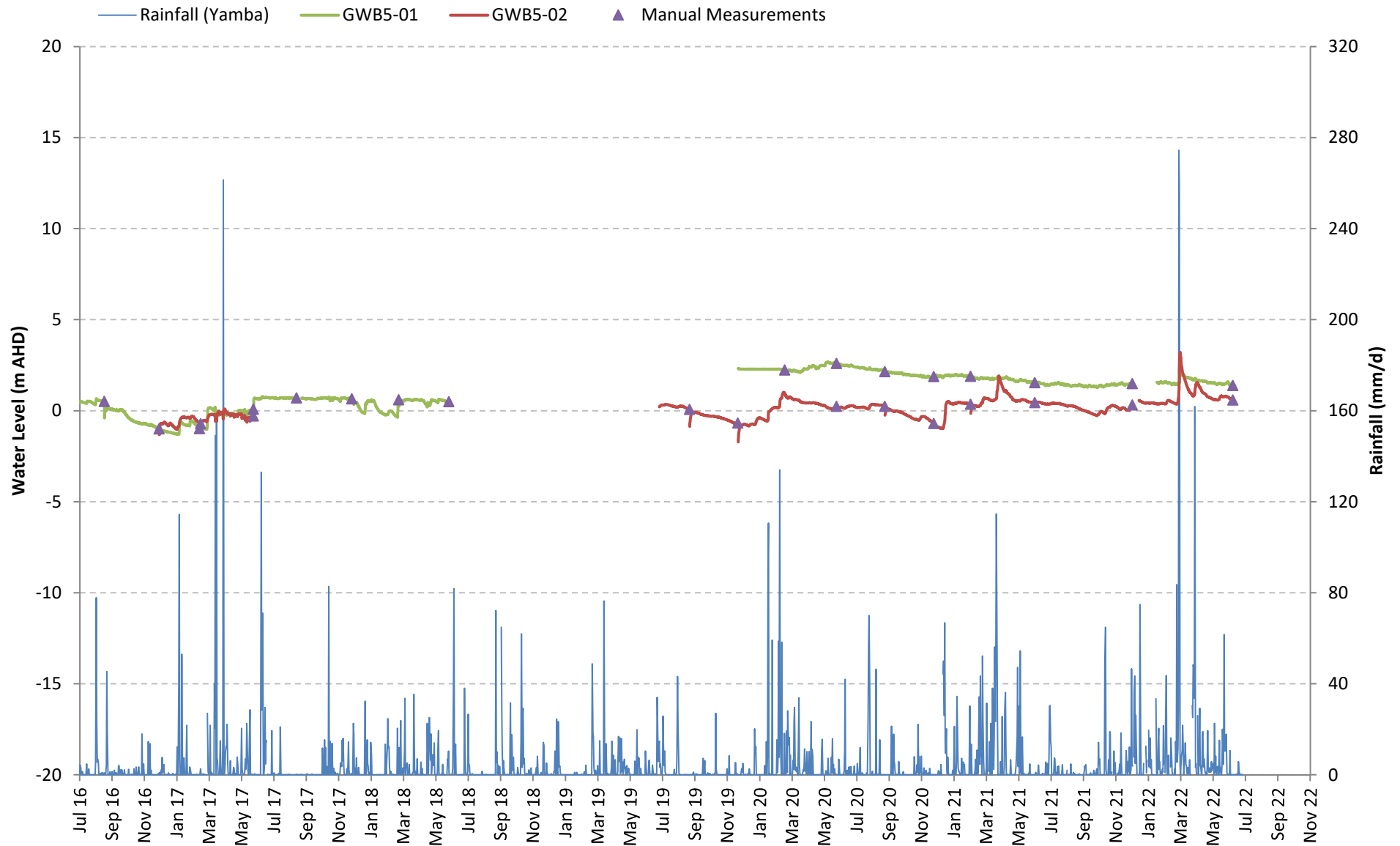
GWB4-05 & GWB4-06 Water Levels



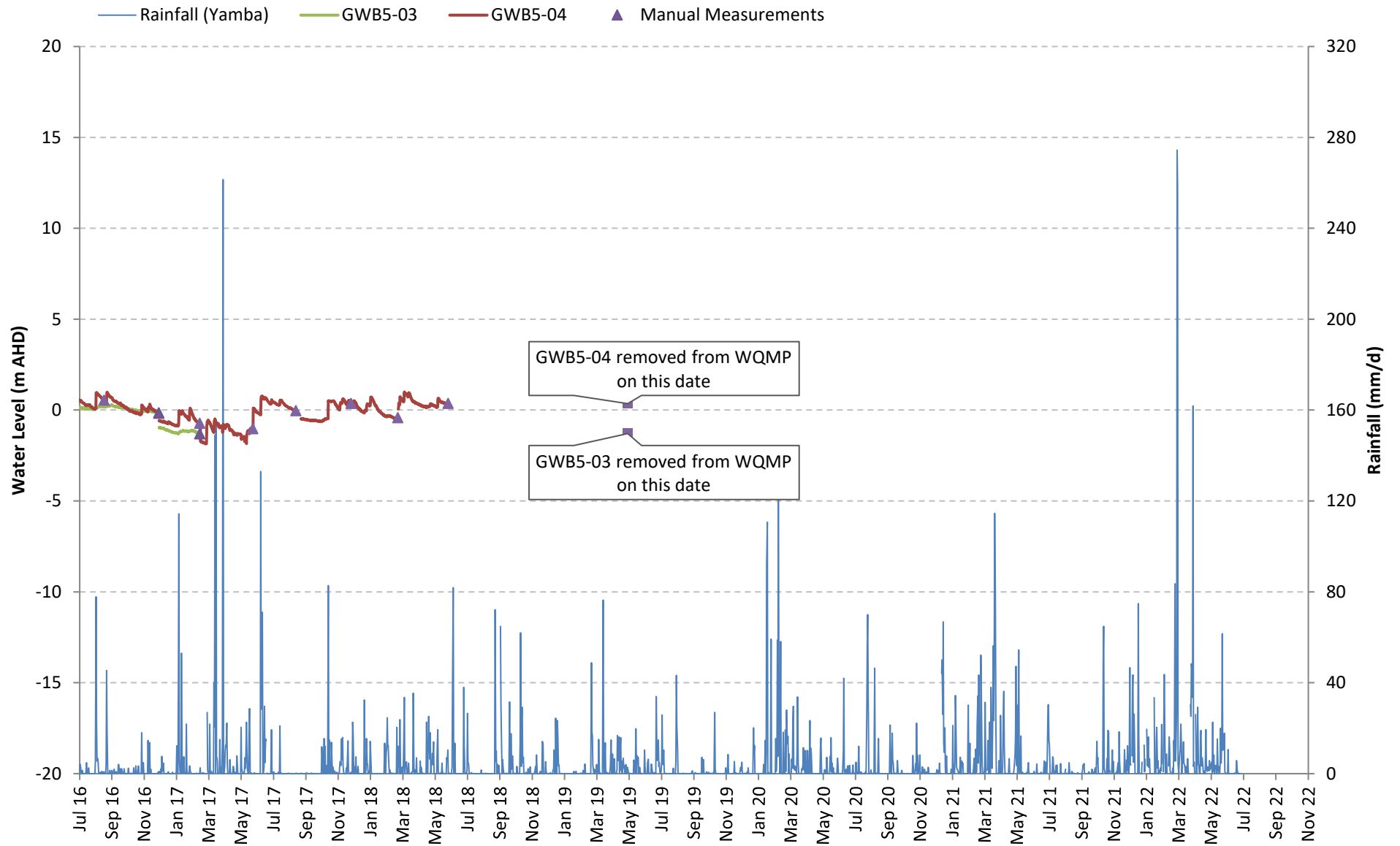
GWB4-21 Water Level



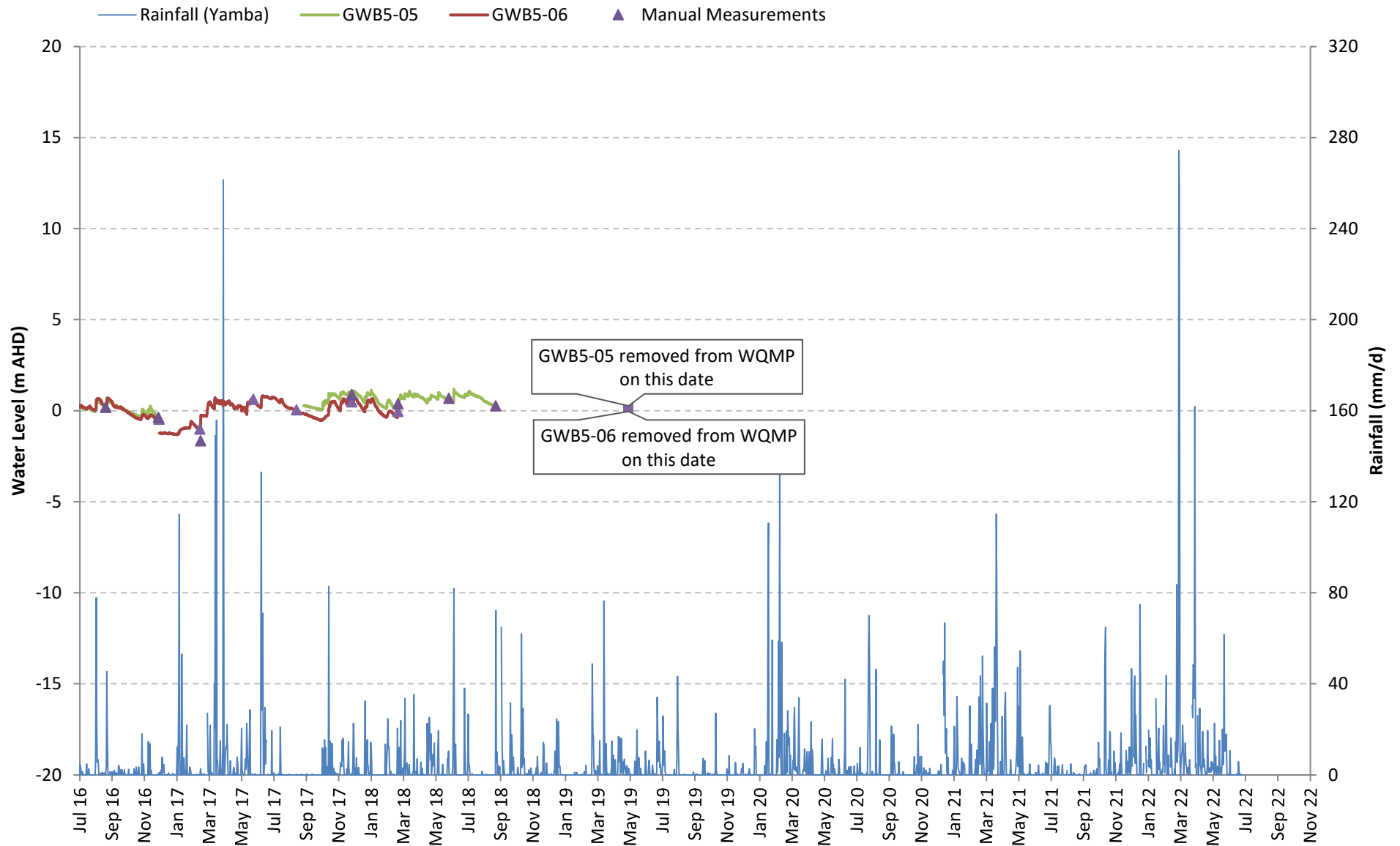
GWB5-01 & GWB5-02 Water Levels



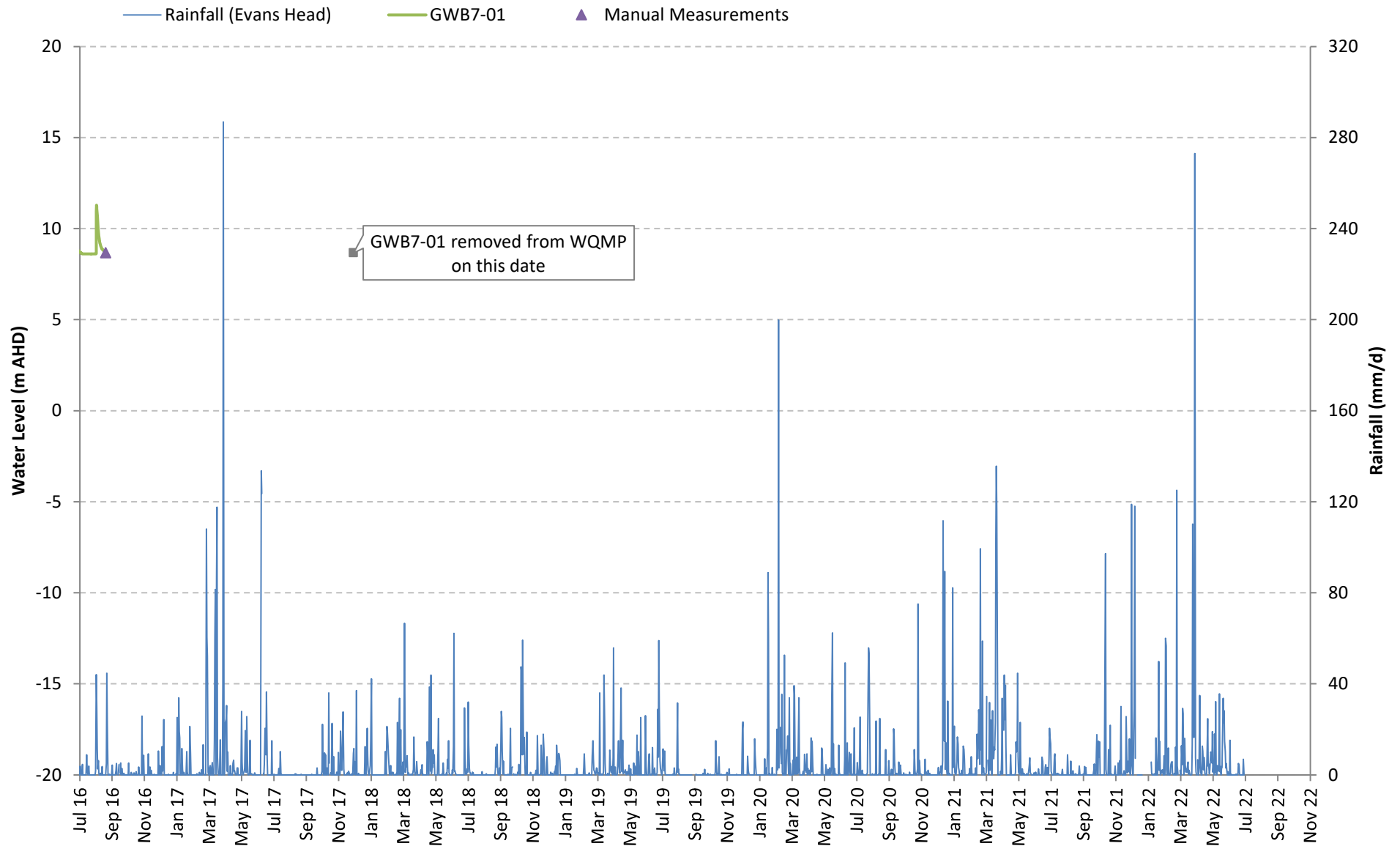
GWB5-03 & GWB5-04 Water Levels



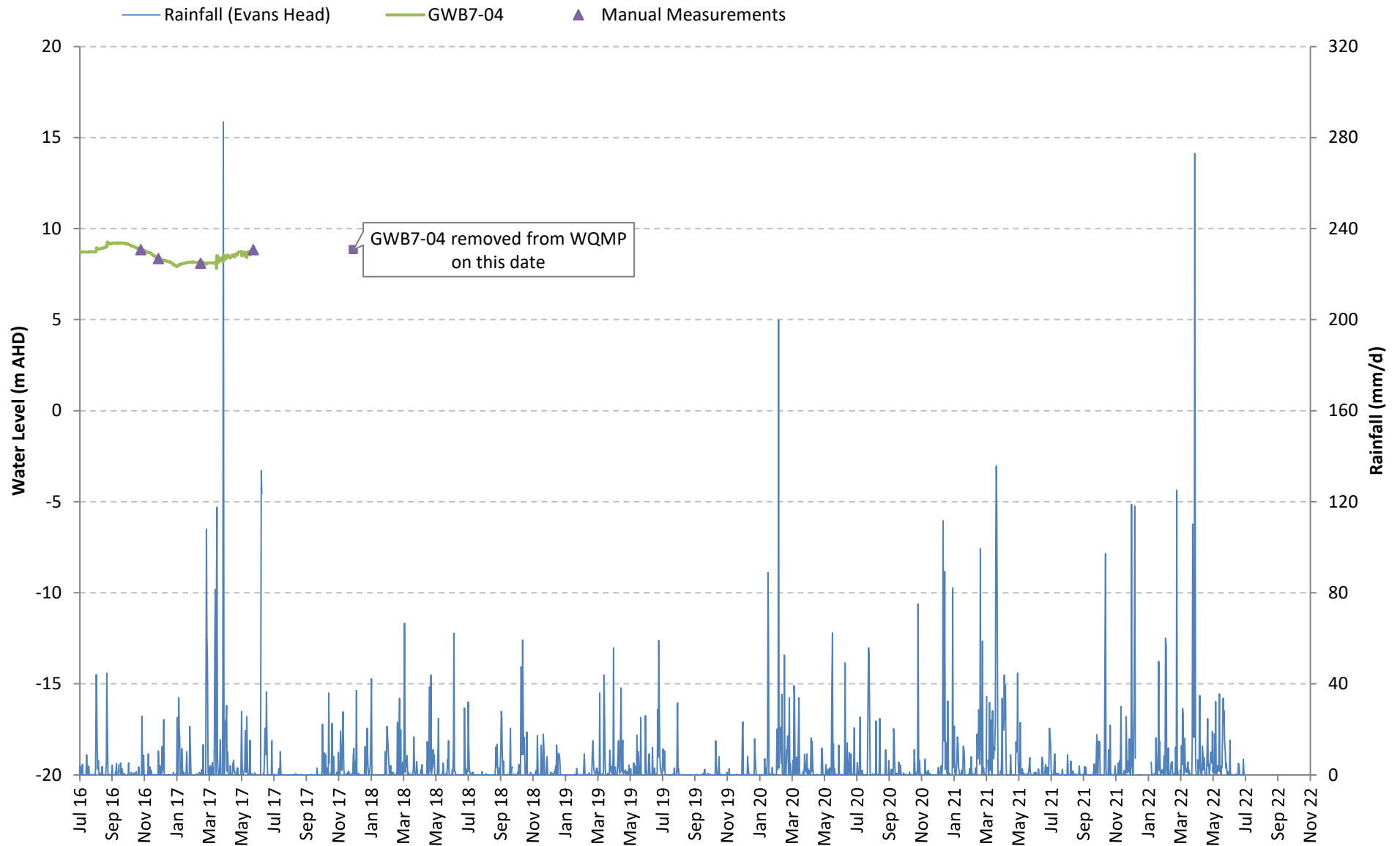
GWB5-05 & GWB5-06 Water Levels



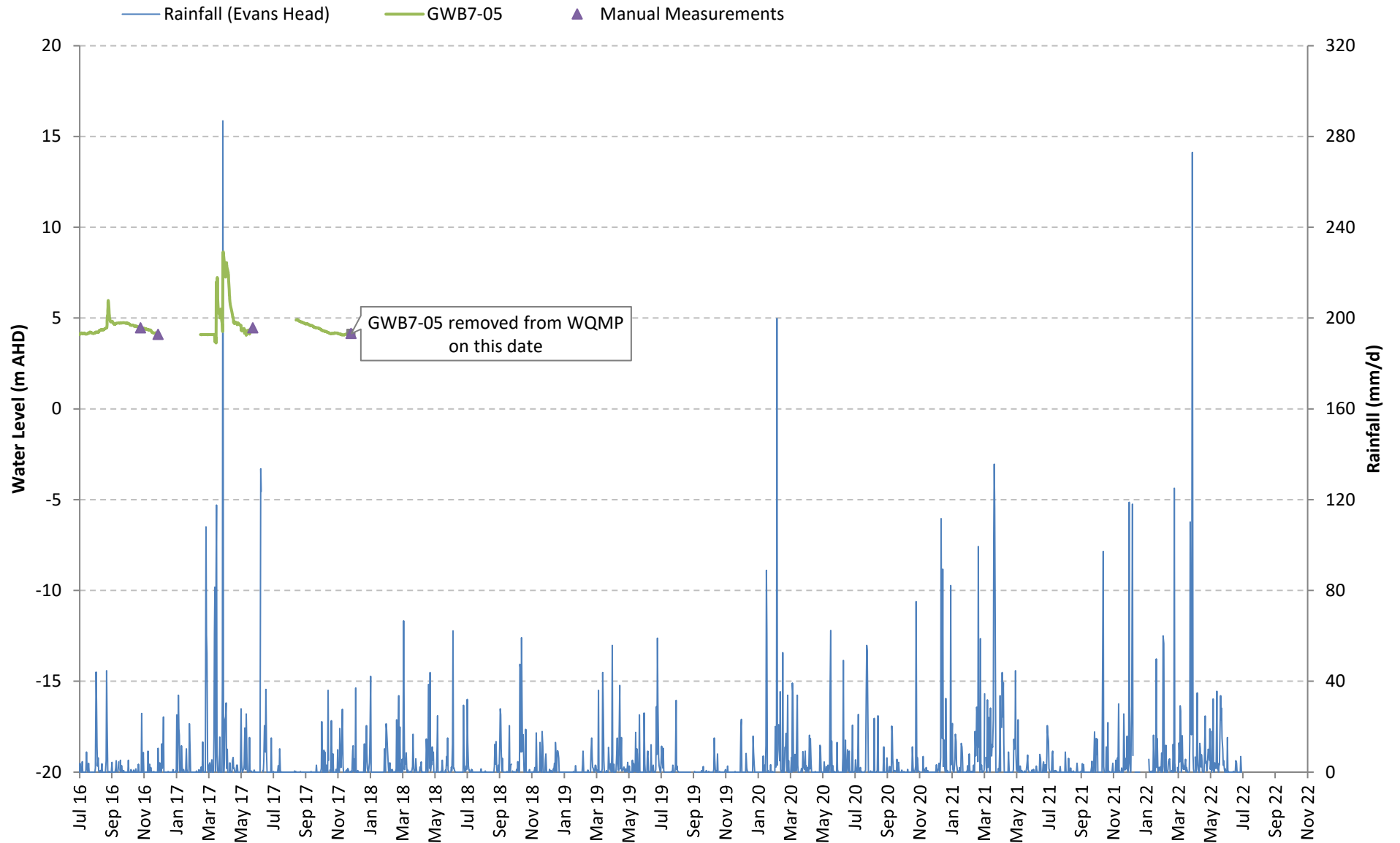
GWB7-01 Water Level



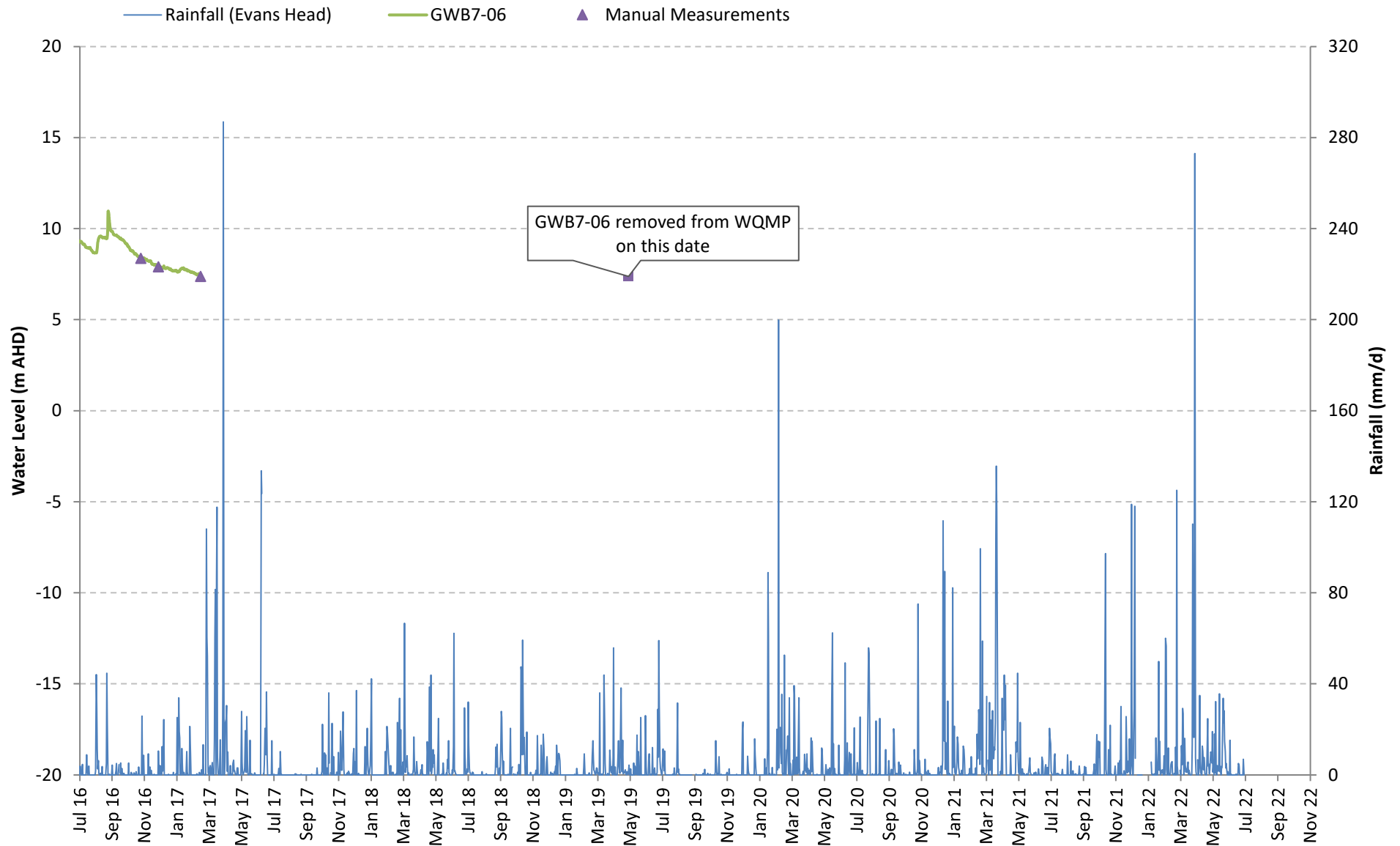
GWB7-04 Water Level



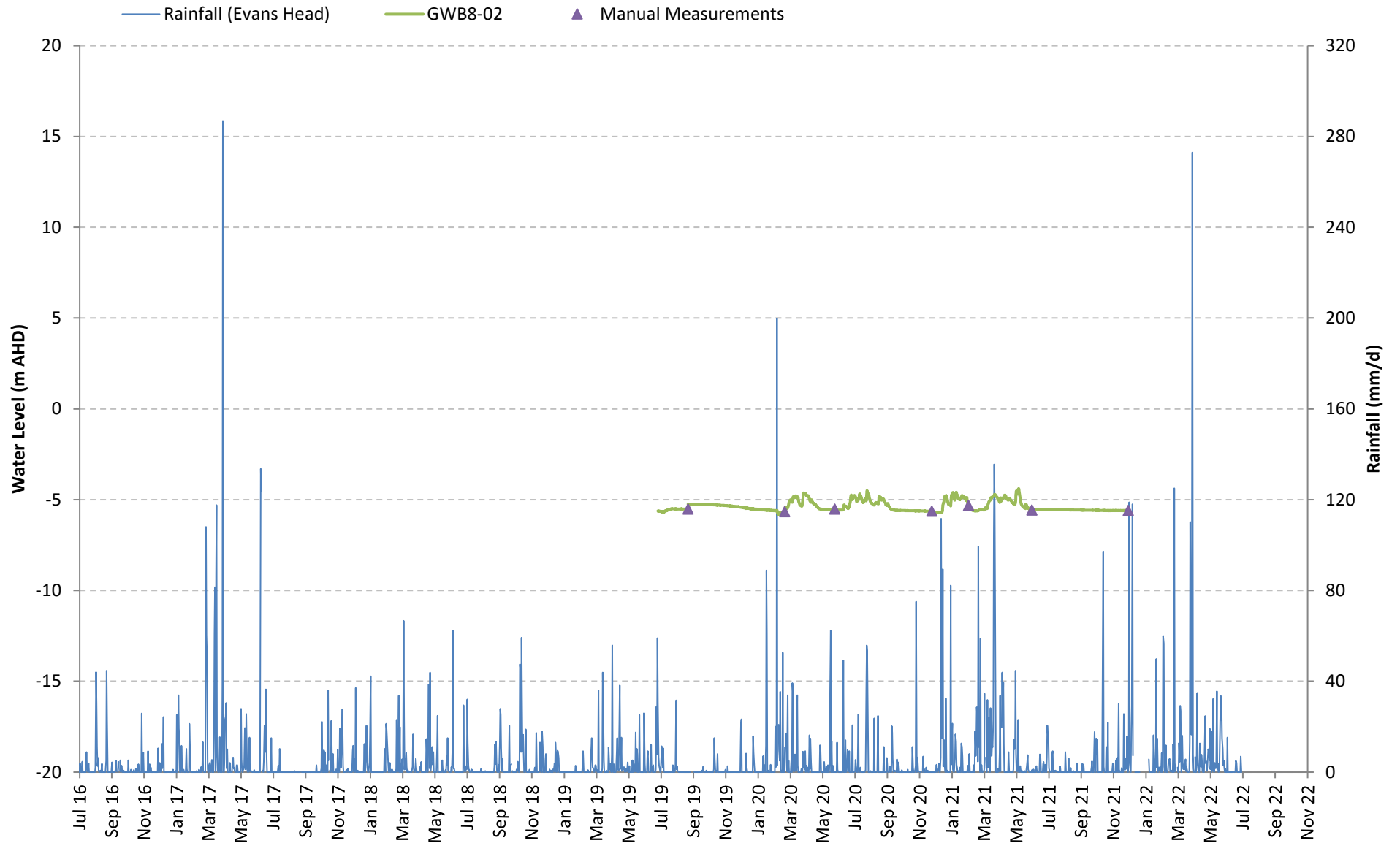
GWB7-05 Water Level



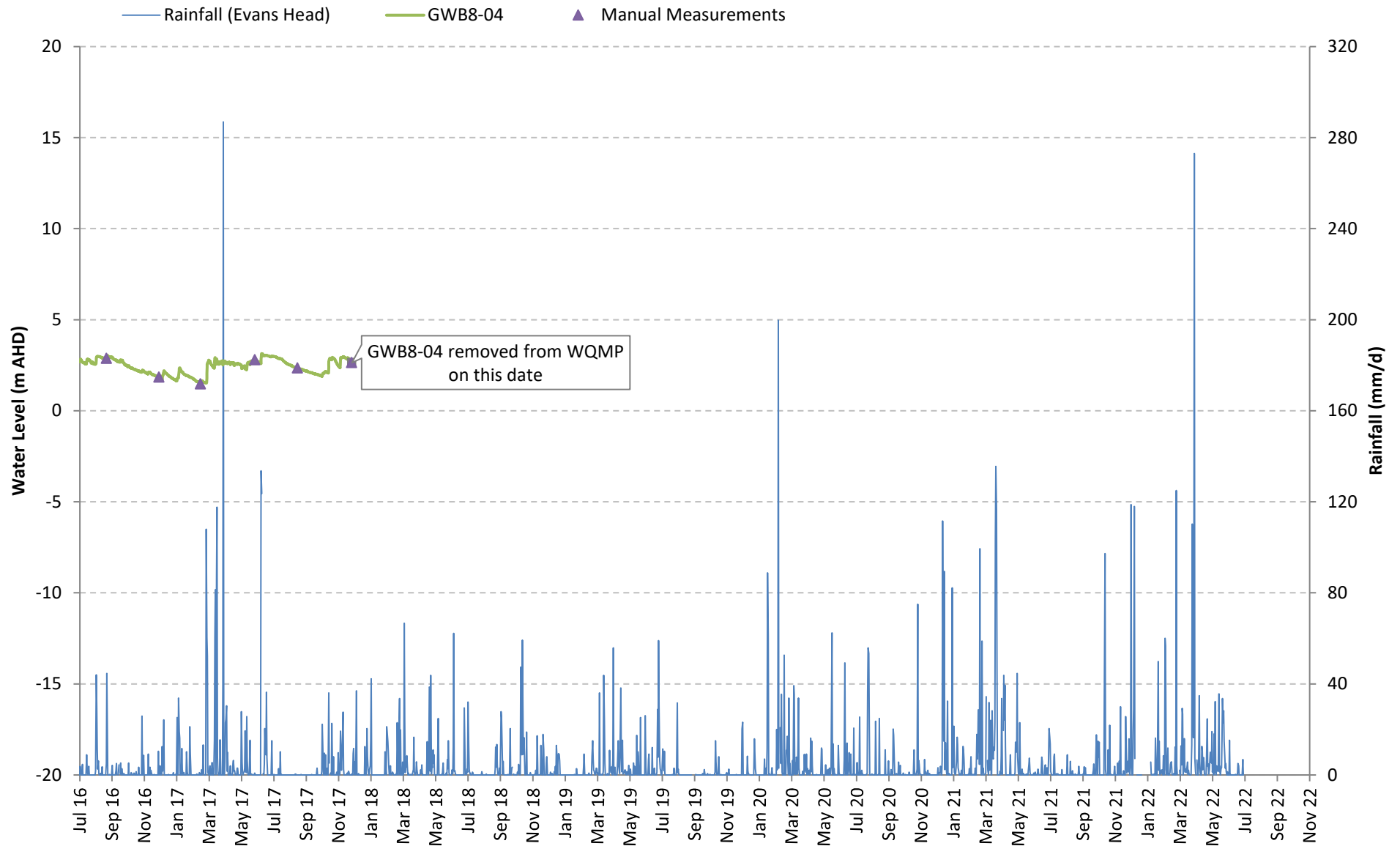
GWB7-06 Water Level



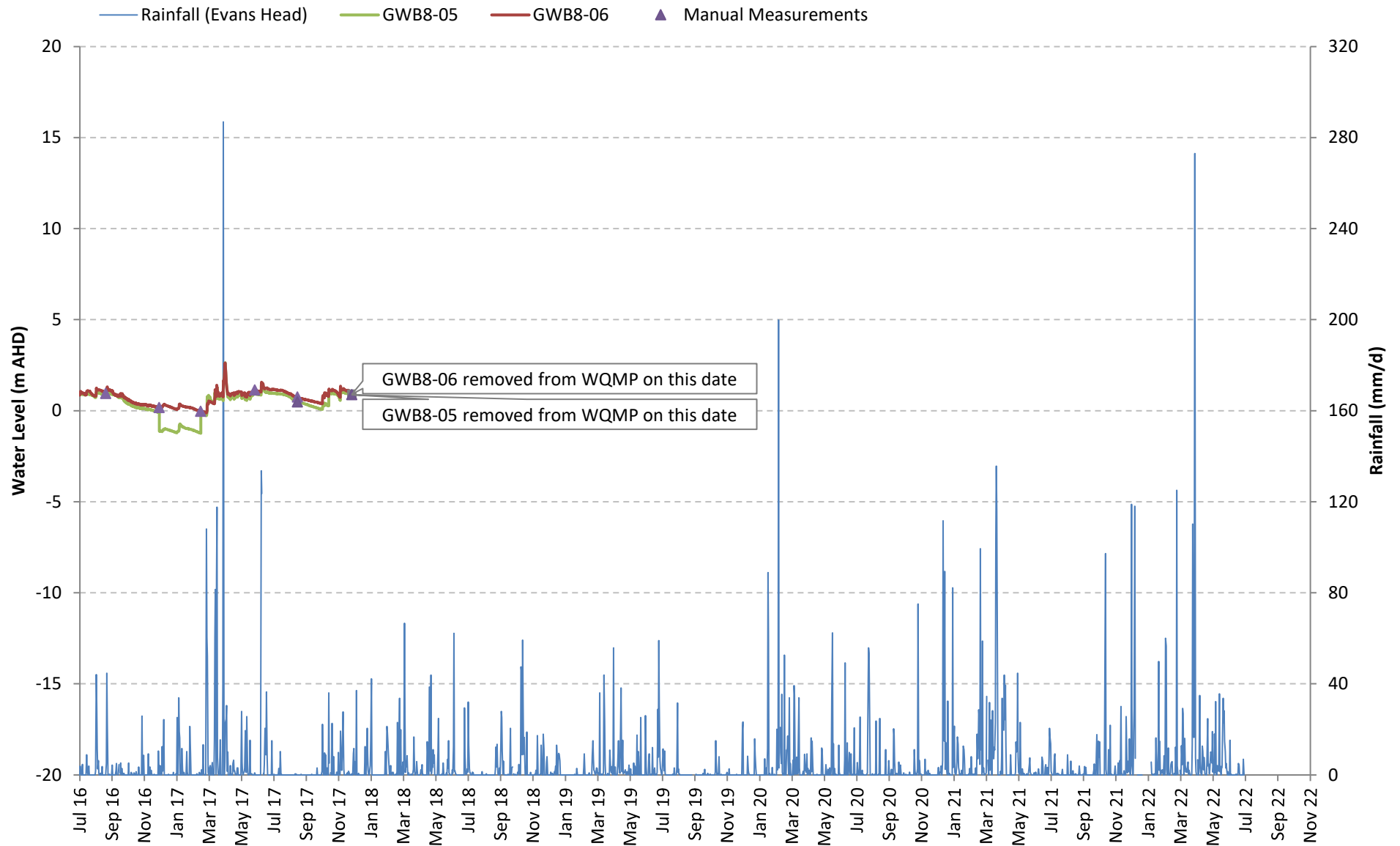
GWB8-02 Water Level



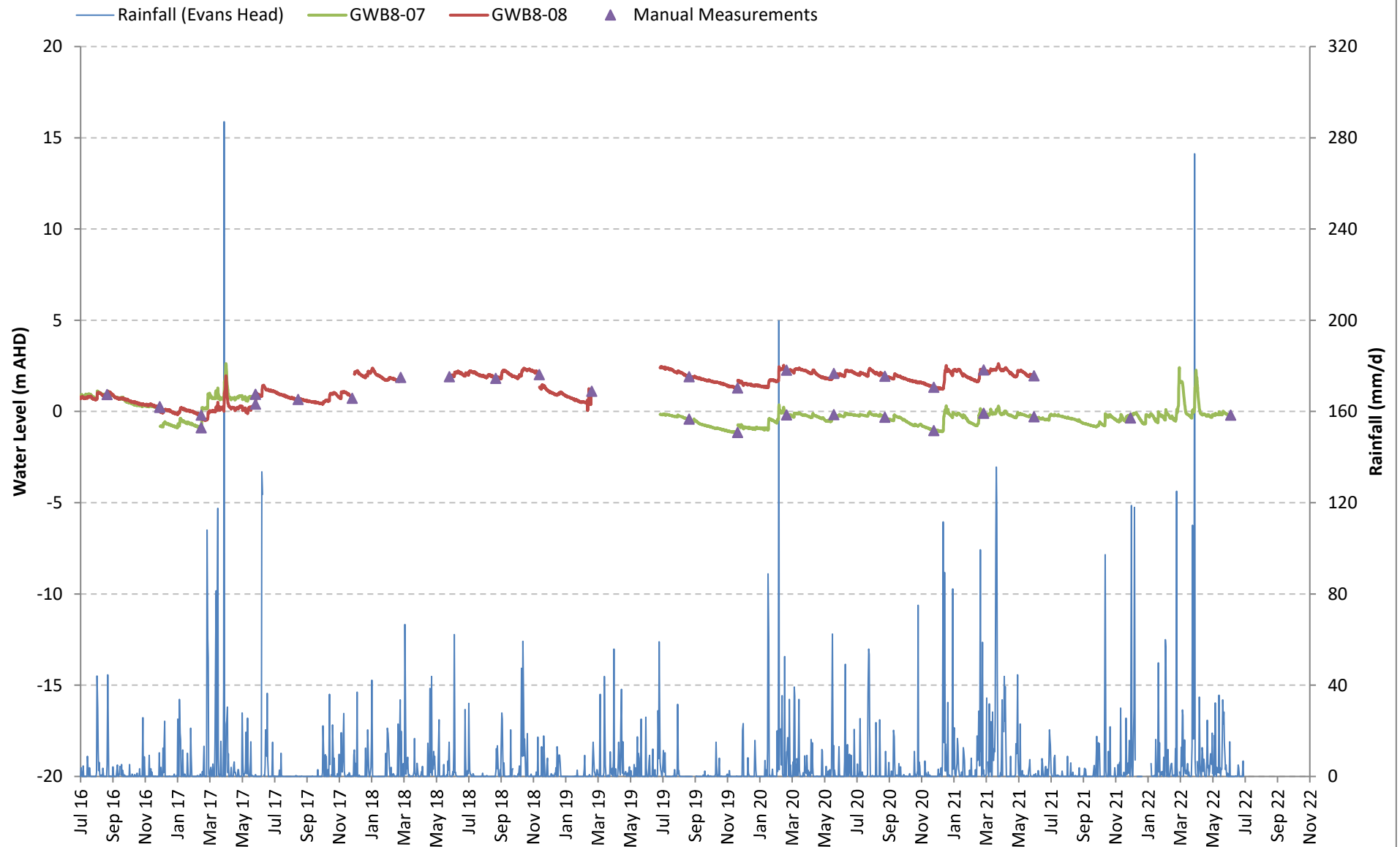
GWB8-04 Water Level



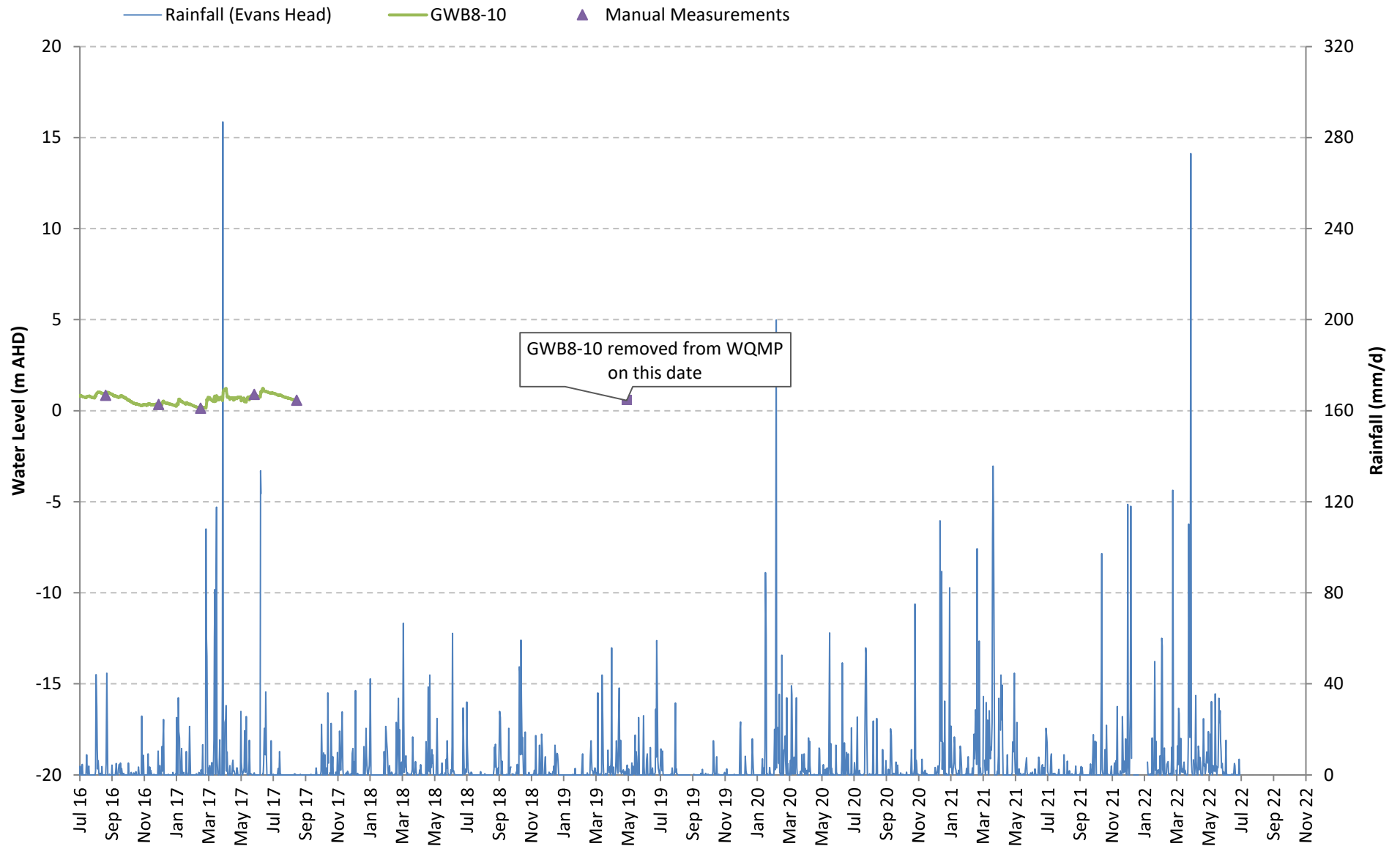
GWB8-05 & GWB8-06 Water Levels



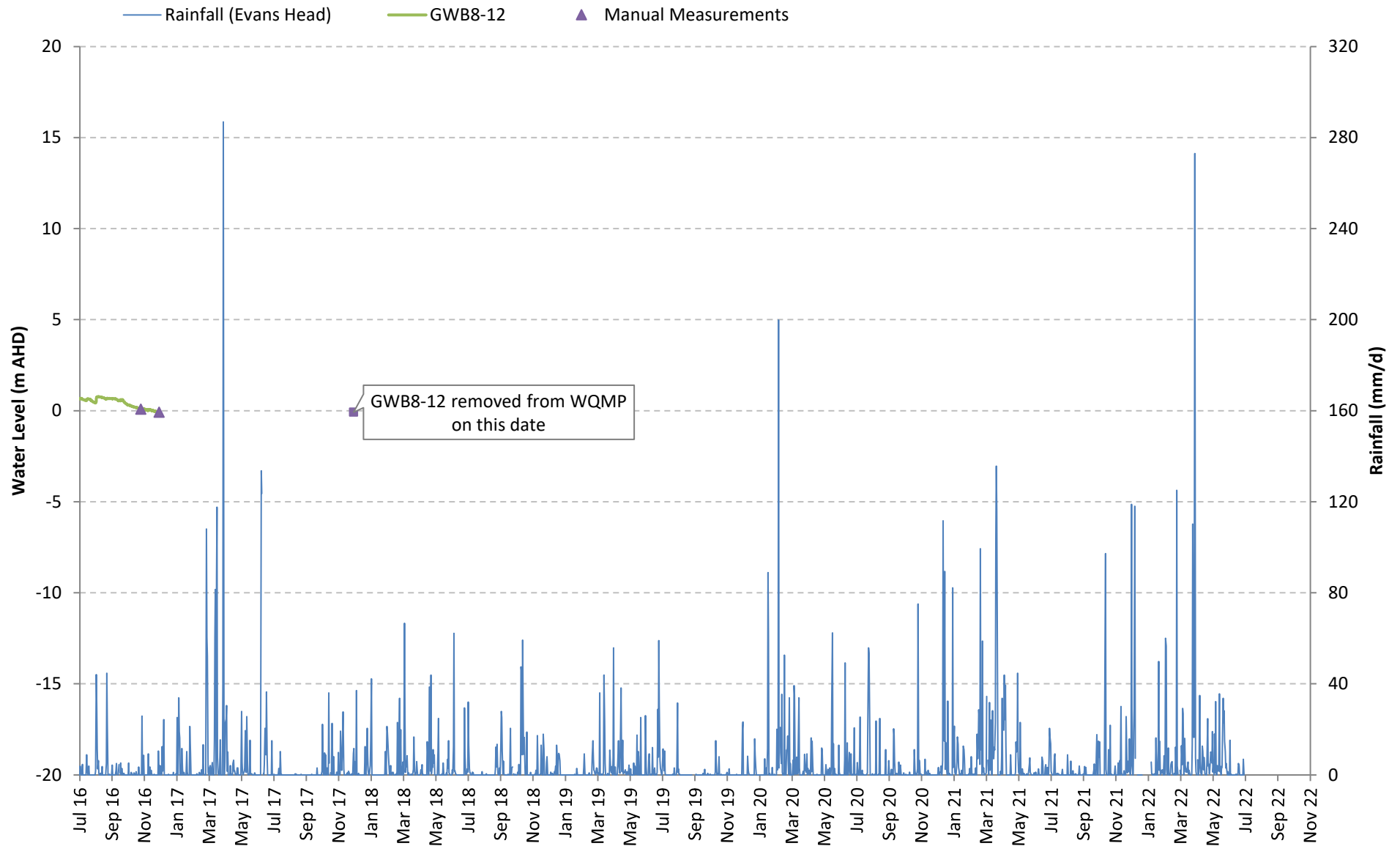
GWB8-07 & GWB8-08 Water Levels



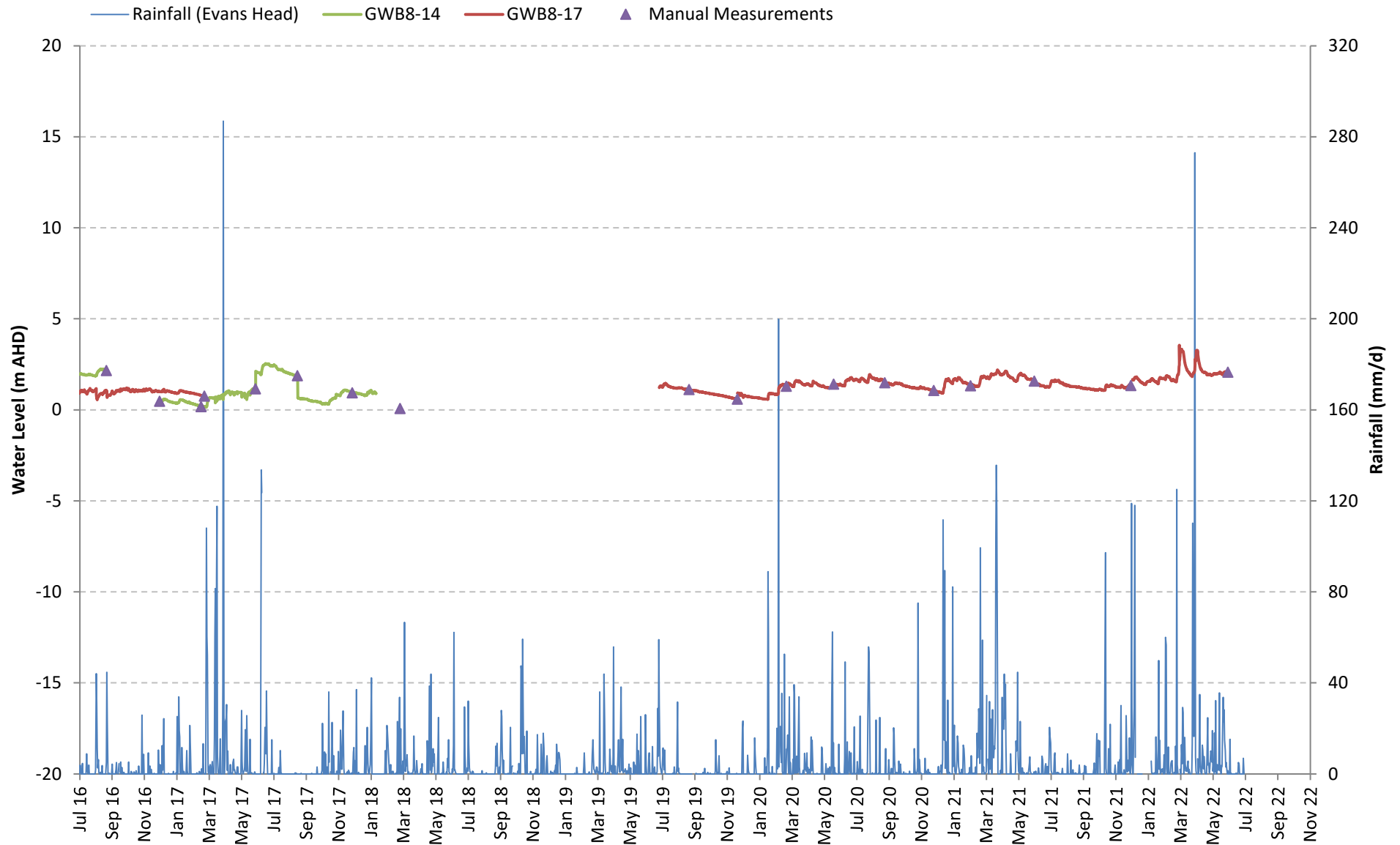
GWB8-10 Water Level



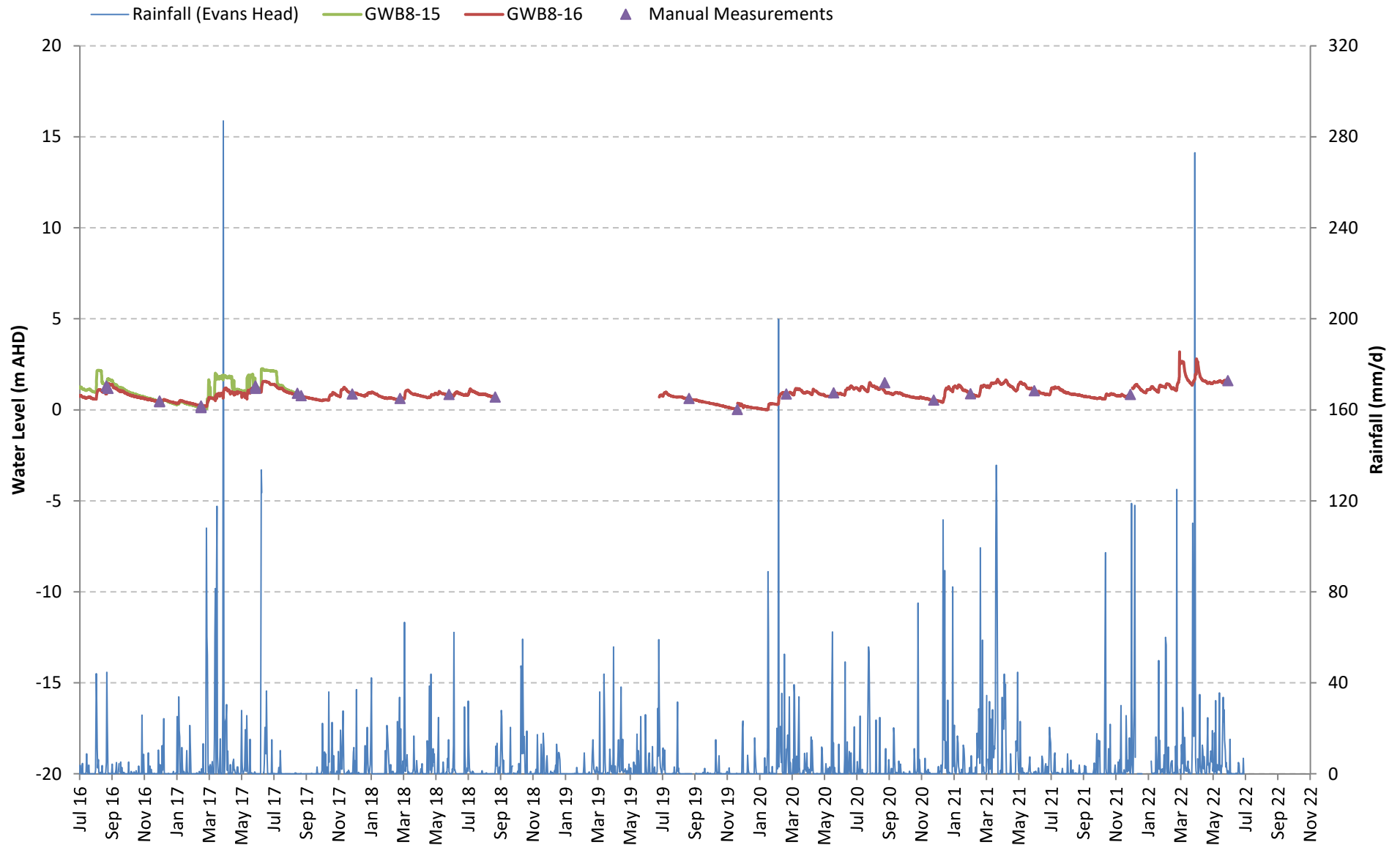
GWB8-12 Water Level



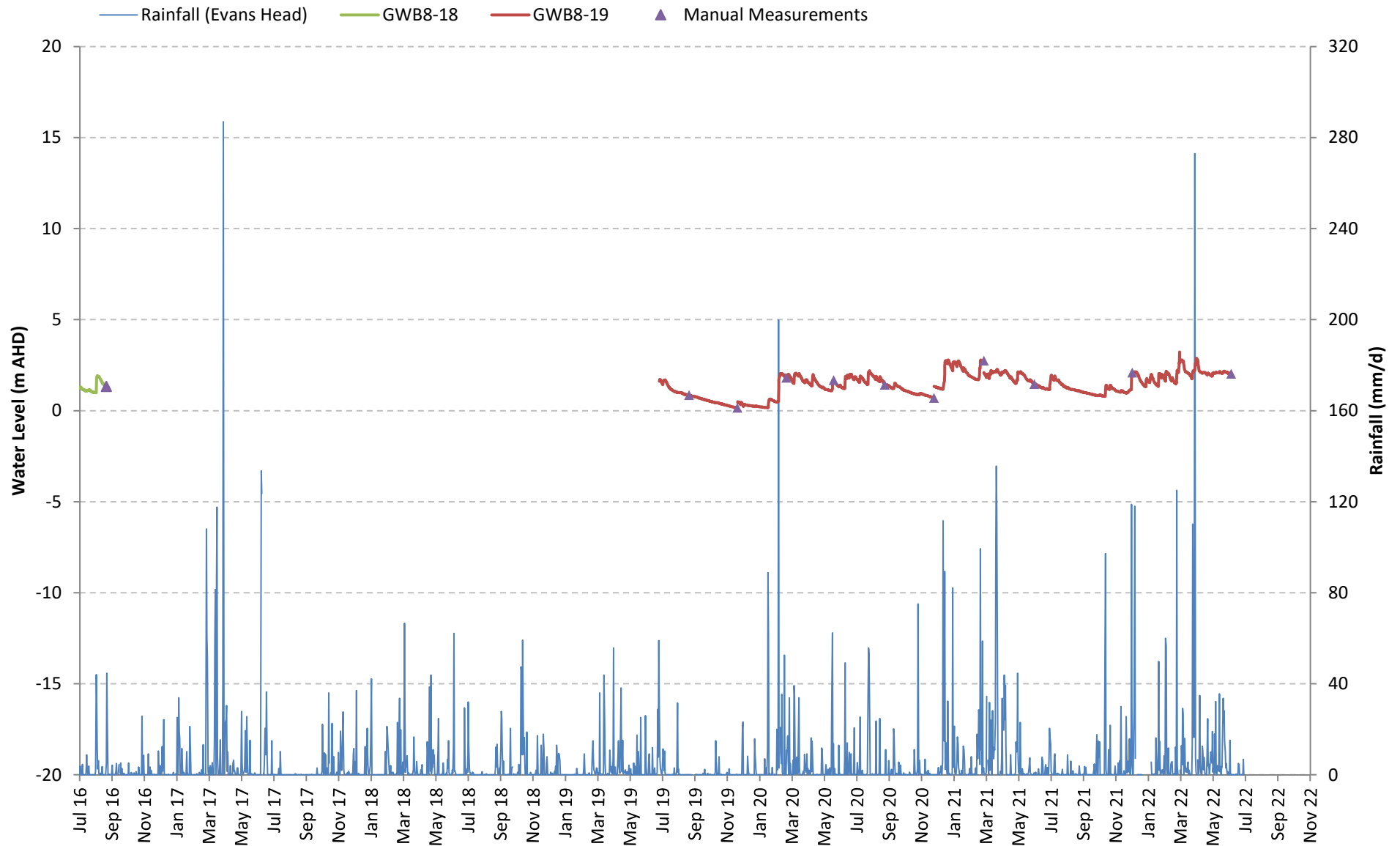
GWB8-14 & GWB8-17 Water Levels



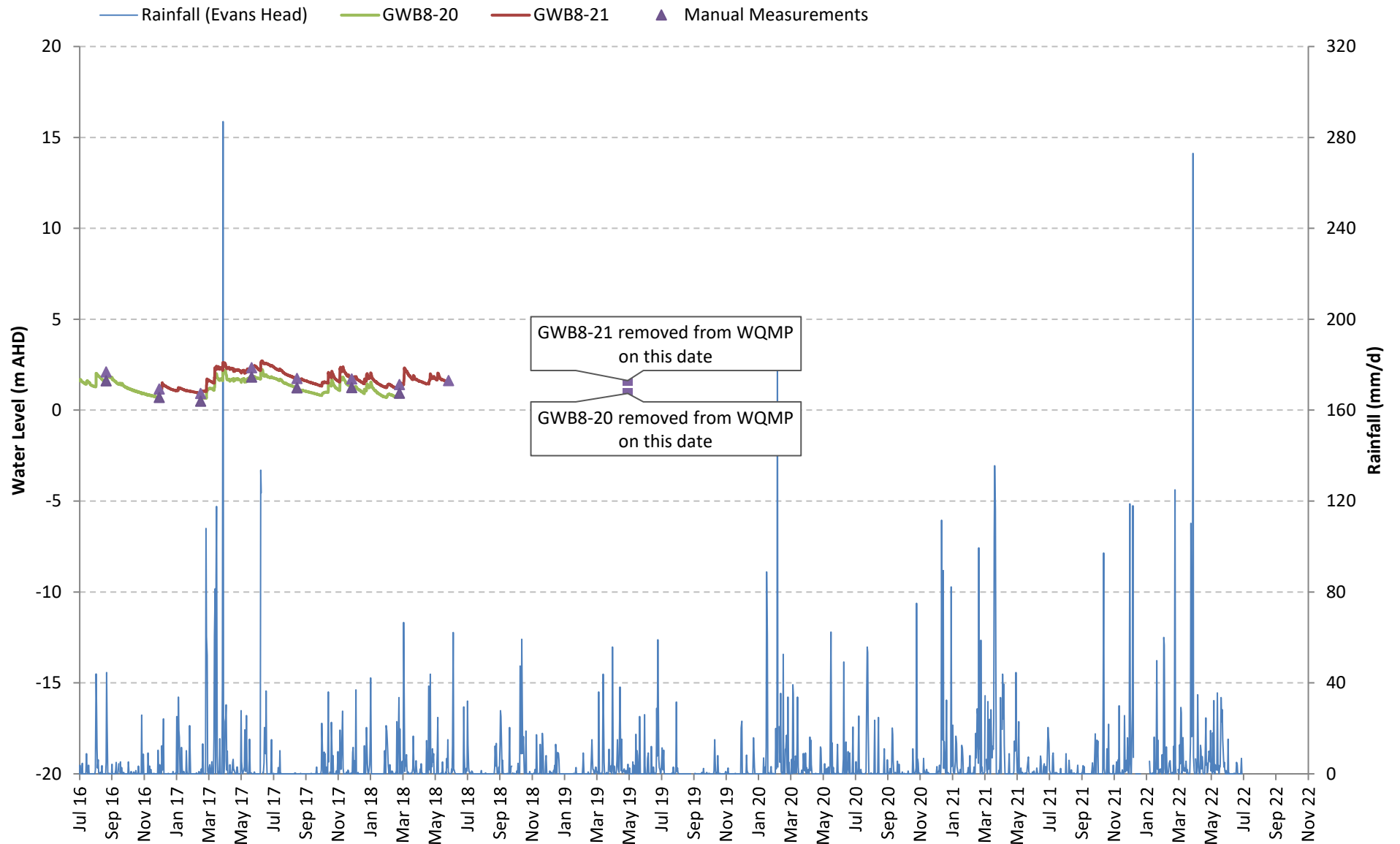
GWB8-15 & GWB8-16 Water Levels



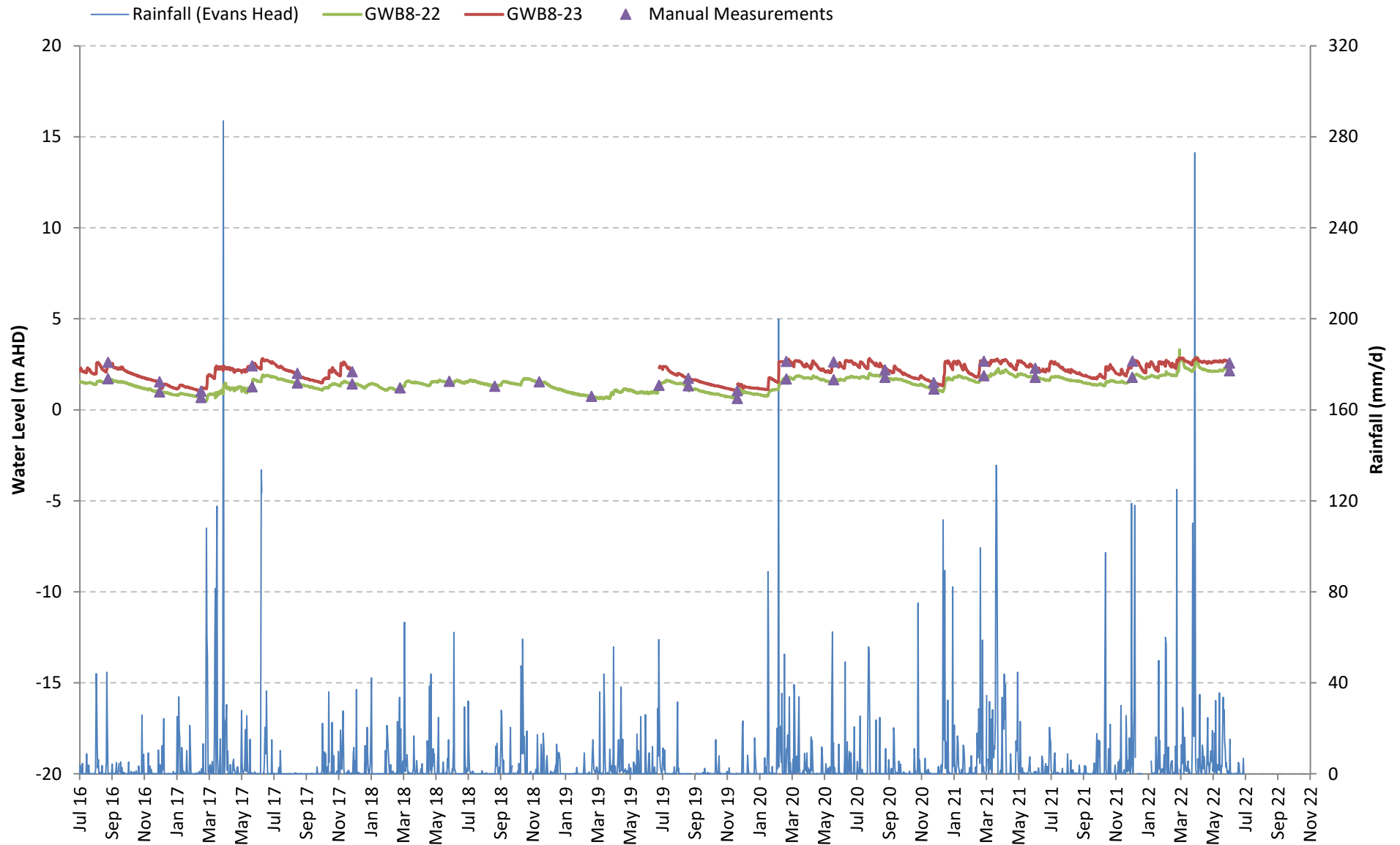
GWB8-18 & GWB8-19 Water Levels



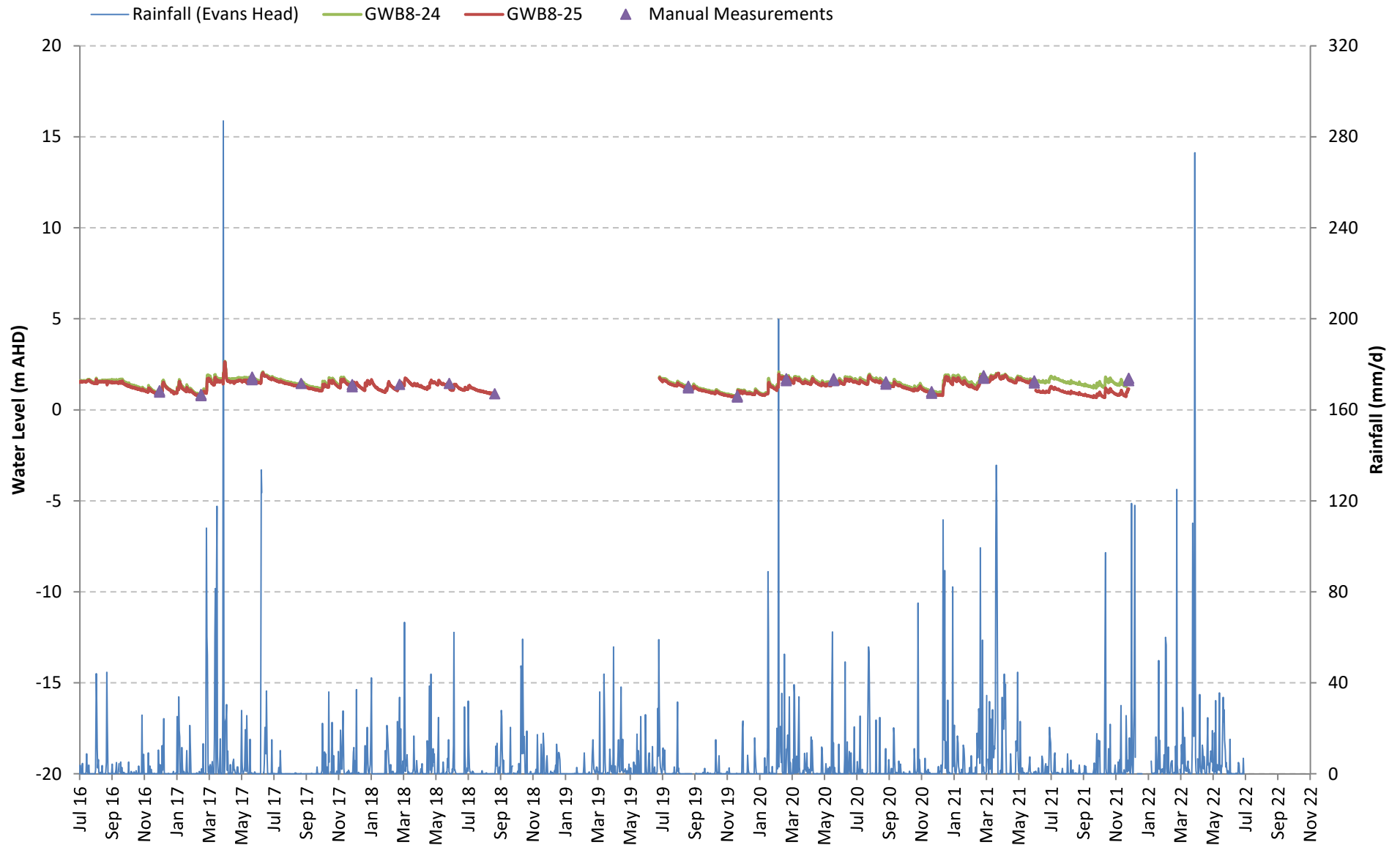
GWB8-20 & GWB8-21 Water Levels



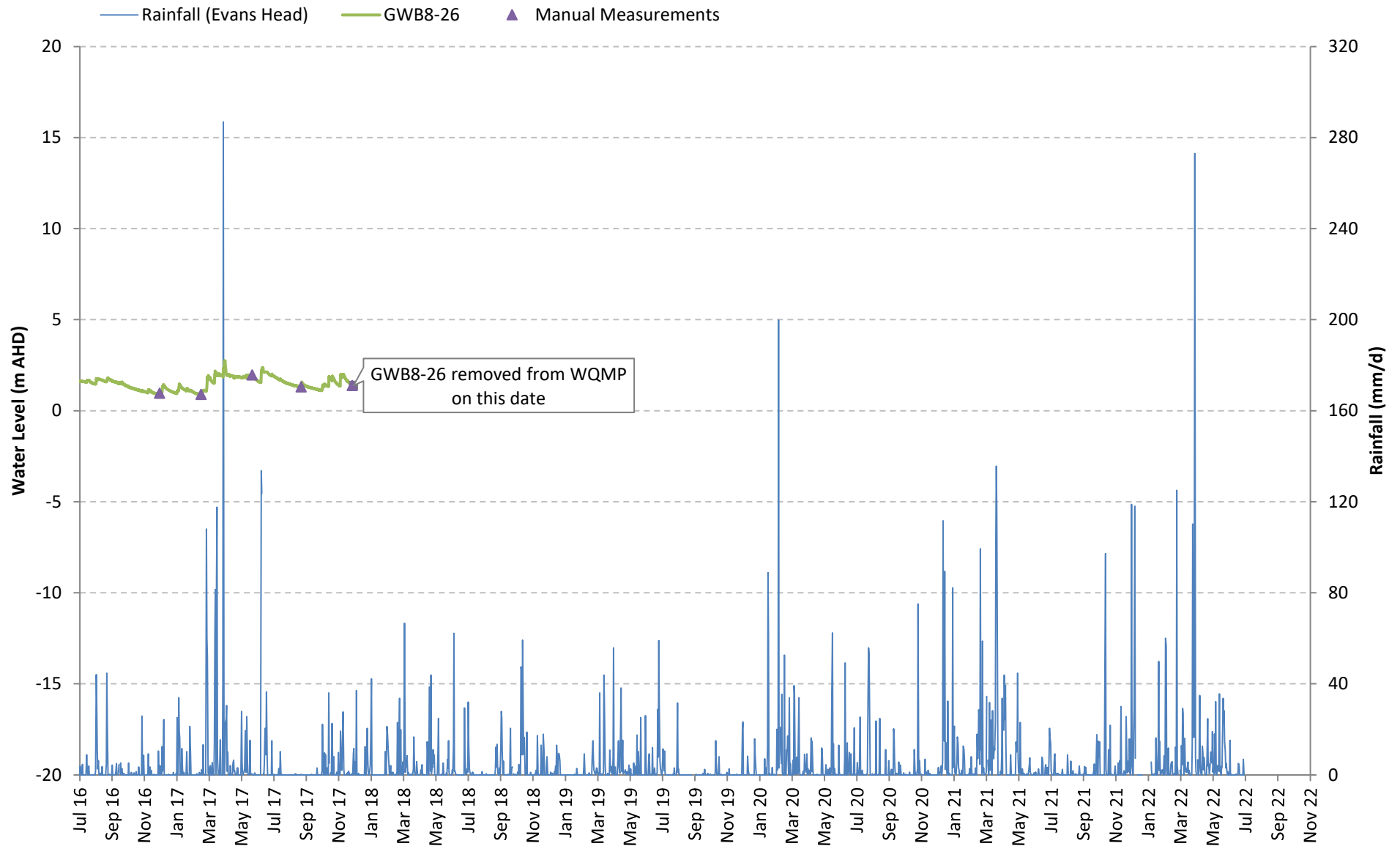
GWB8-22 & GWB8-23 Water Levels



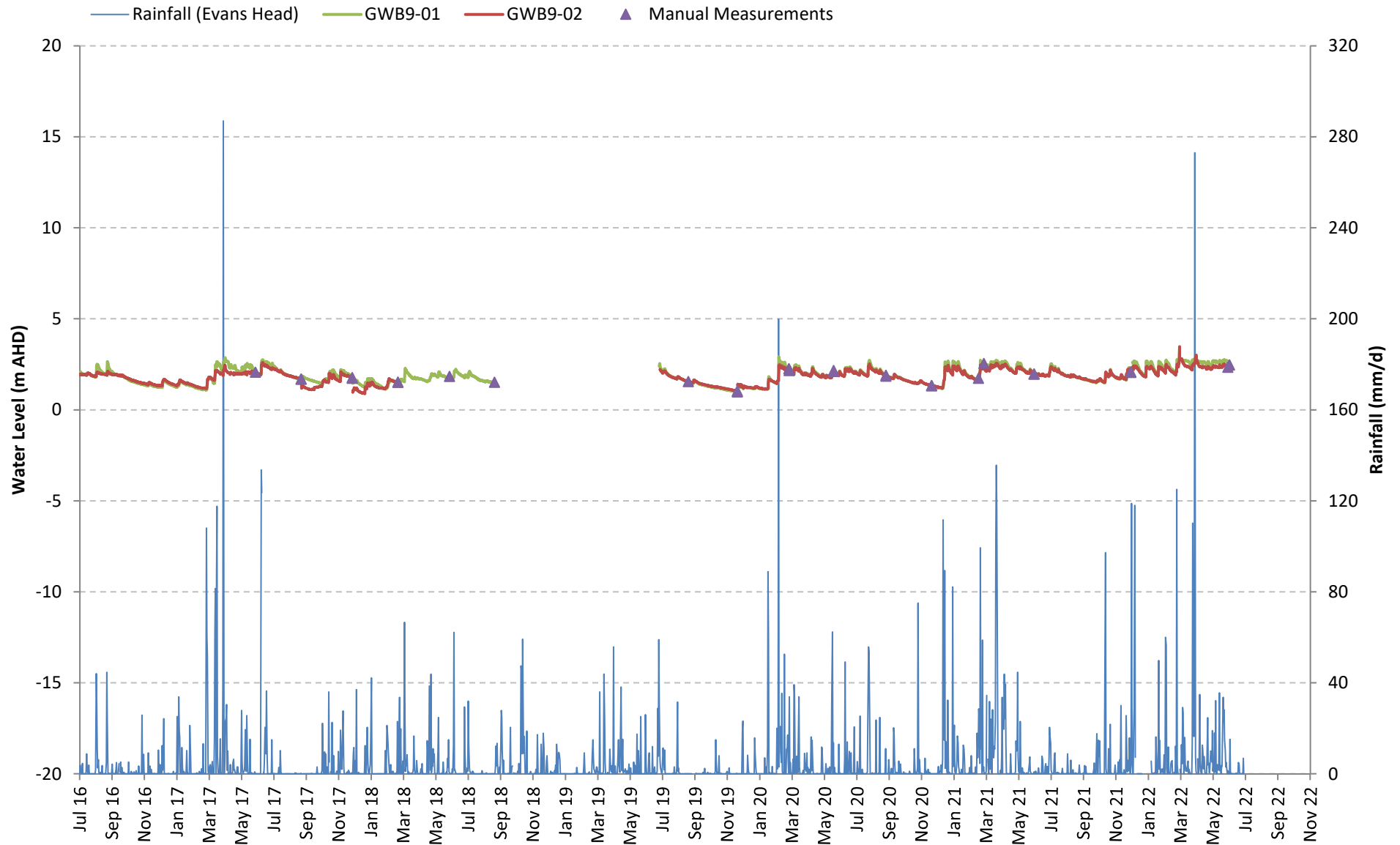
GWB8-24 & GWB8-25 Water Levels



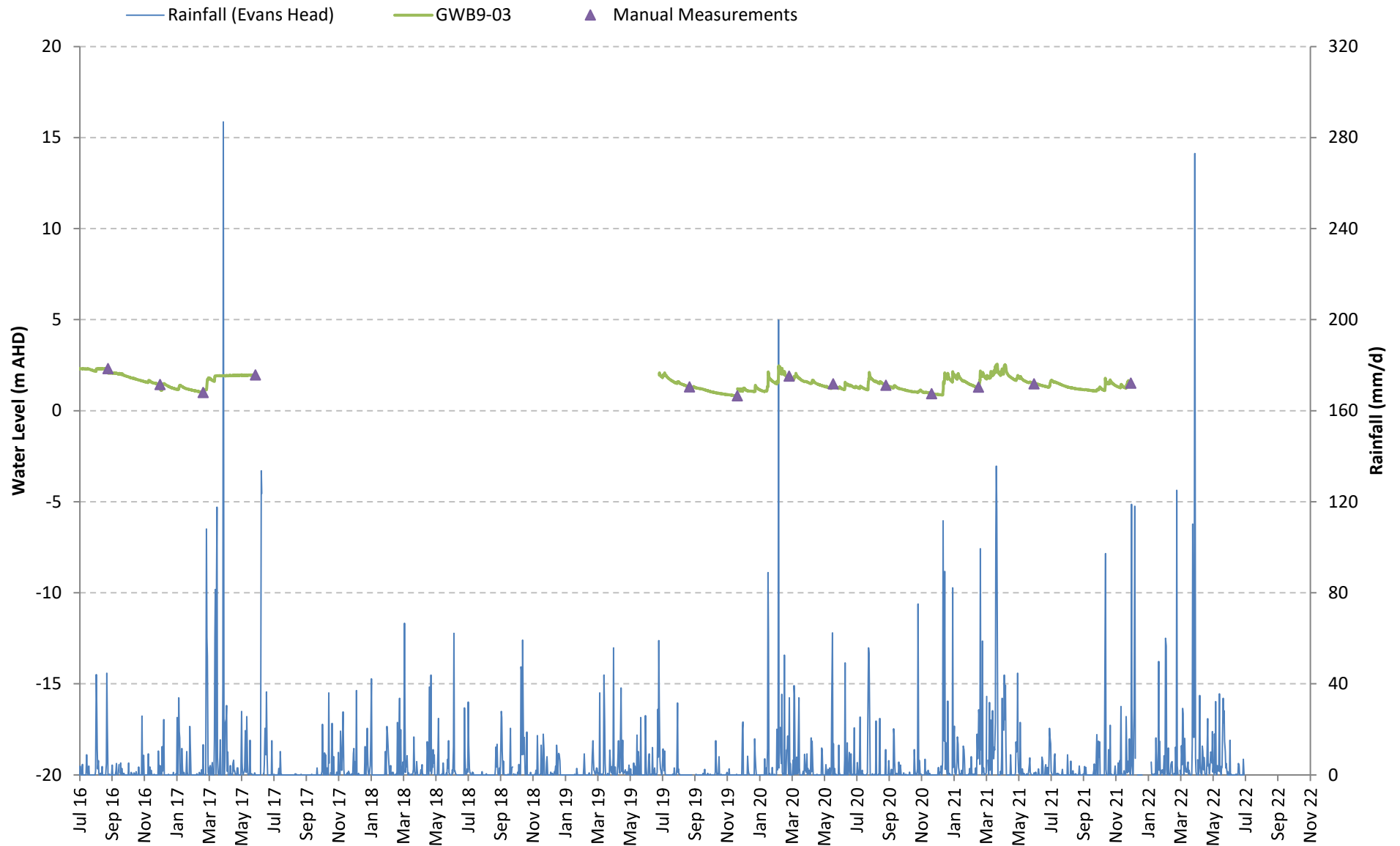
GWB8-26 Water Level



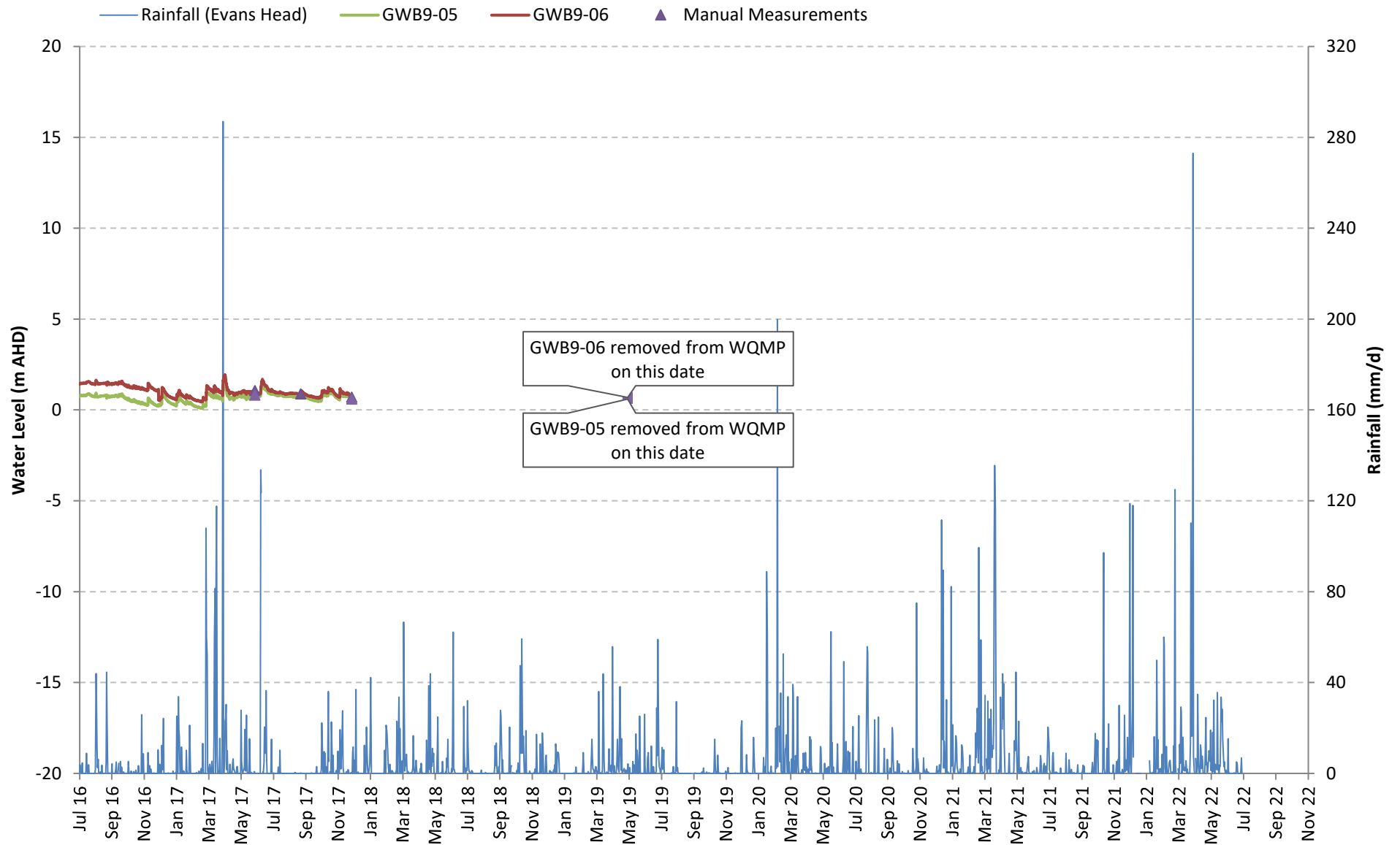
GWB9-01 & GWB9-02 Water Levels



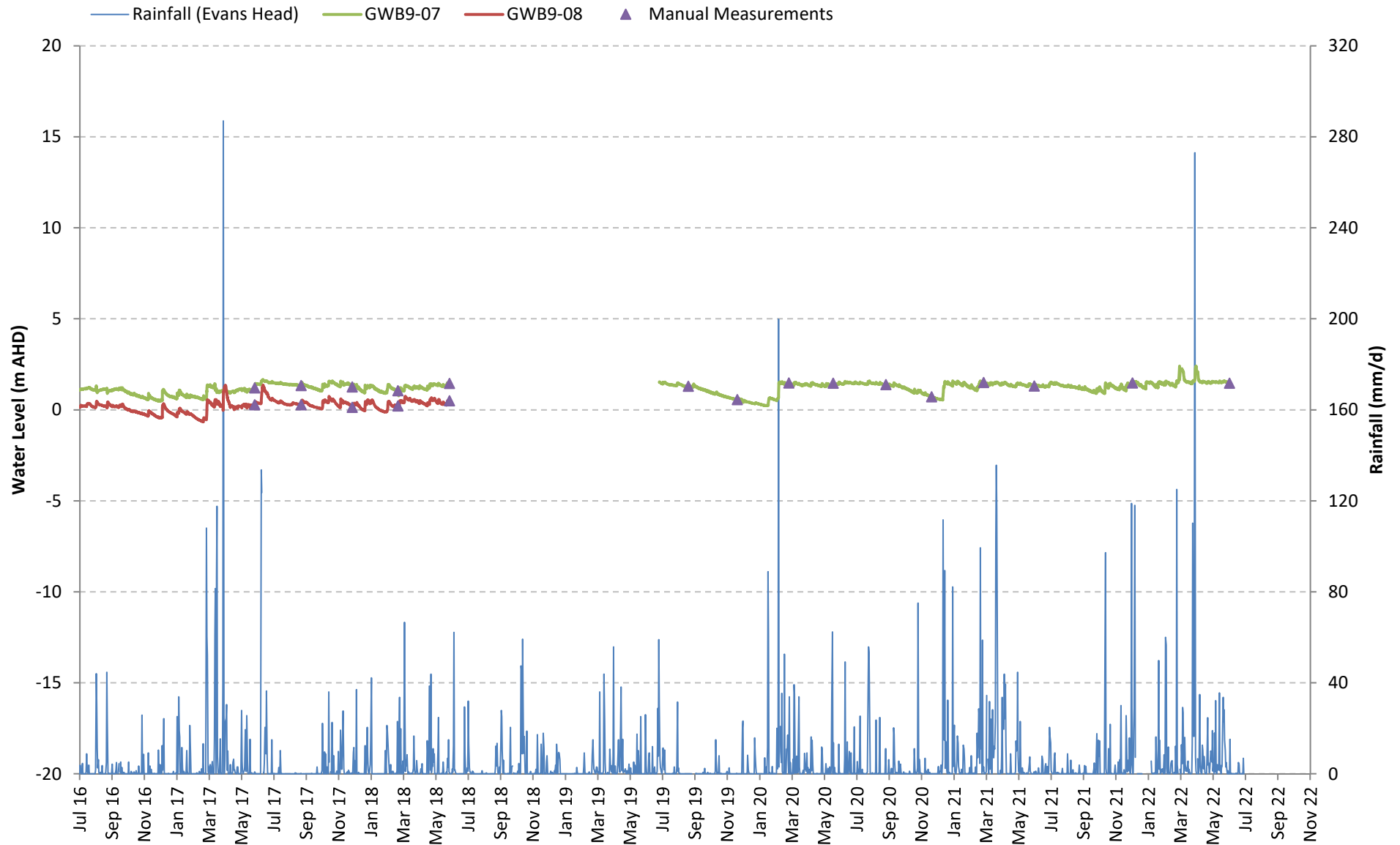
GWB9-03 Water Level



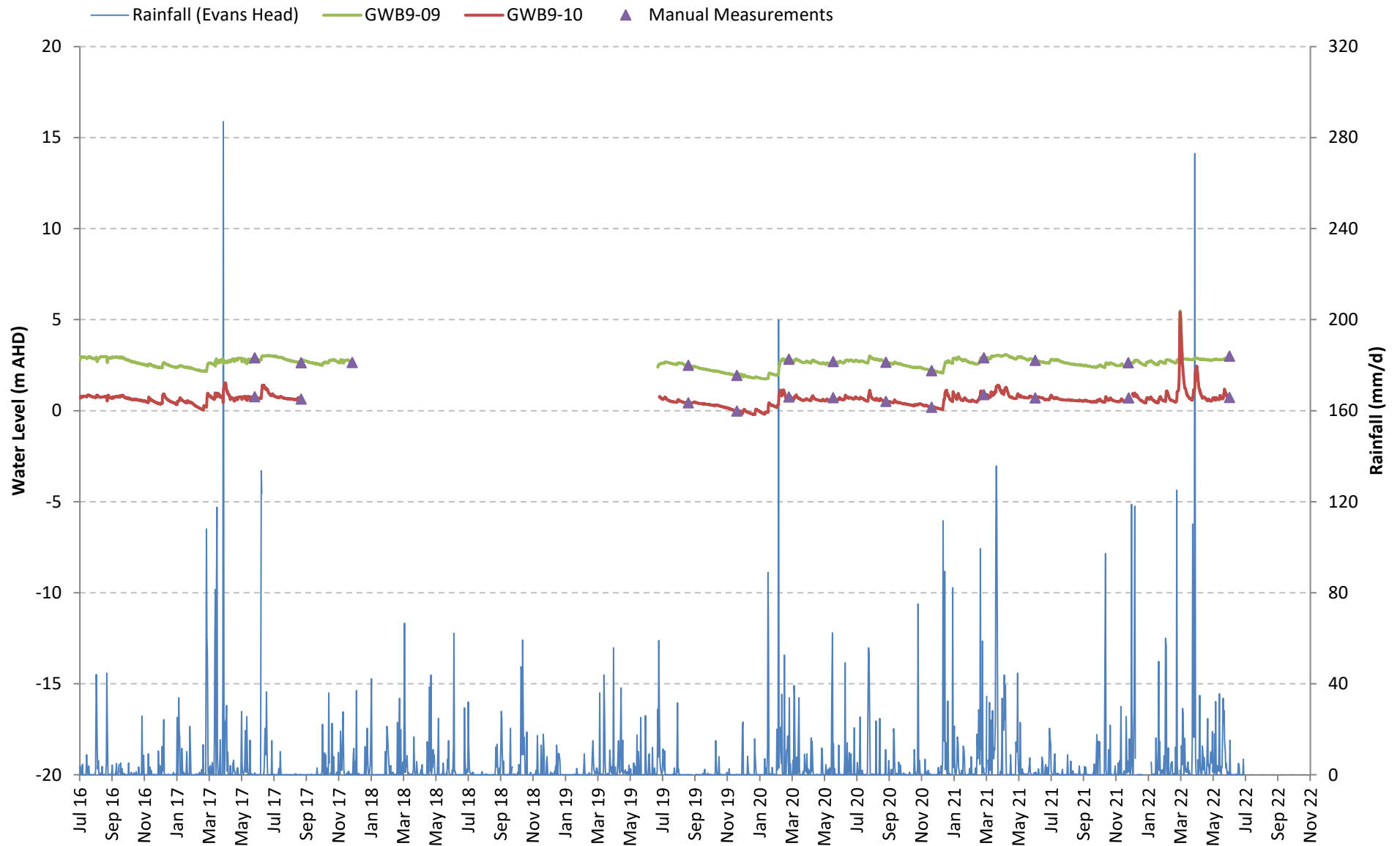
GWB9-05 & GWB9-06 Water Levels



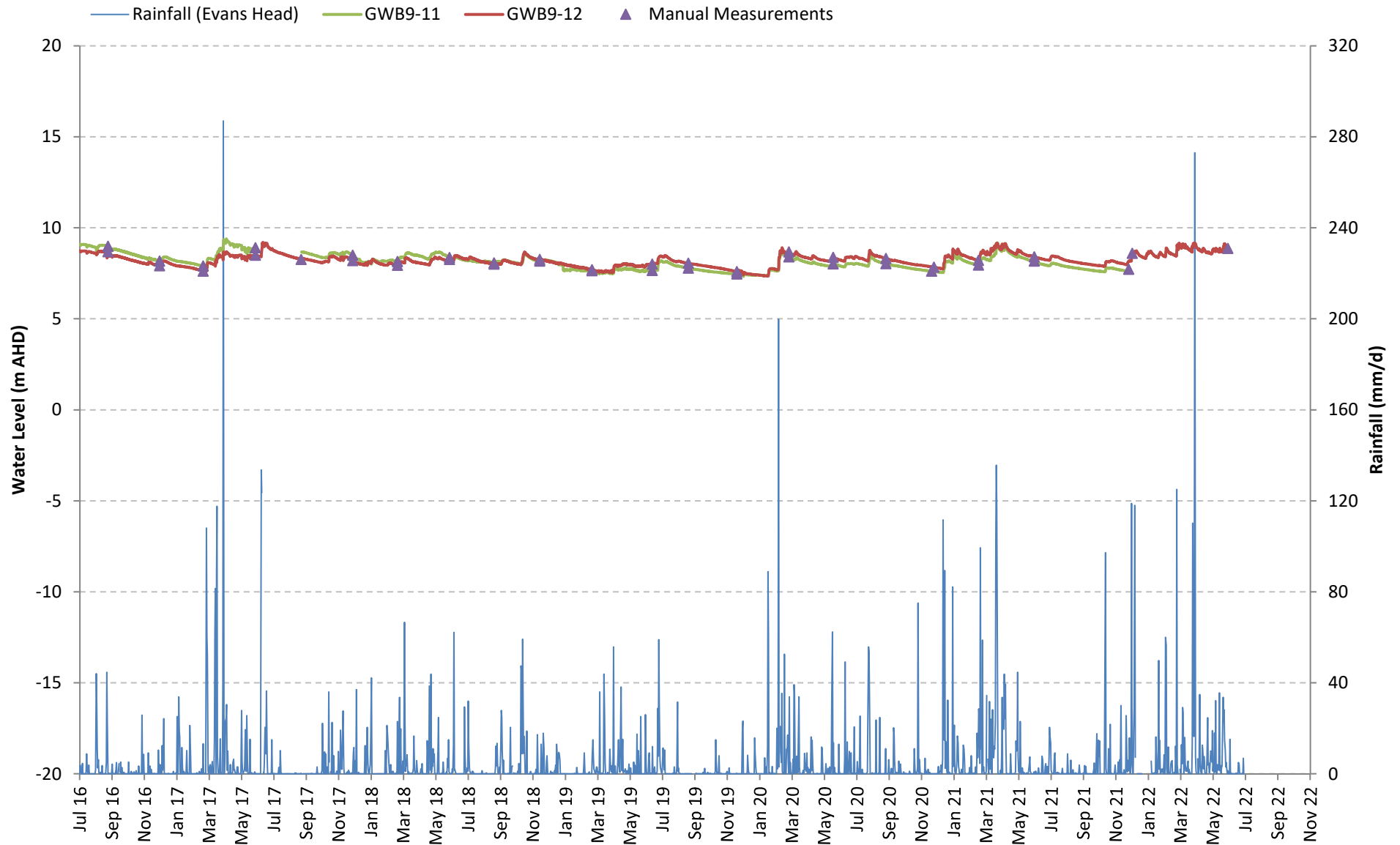
GWB9-07 & GWB9-08 Water Levels



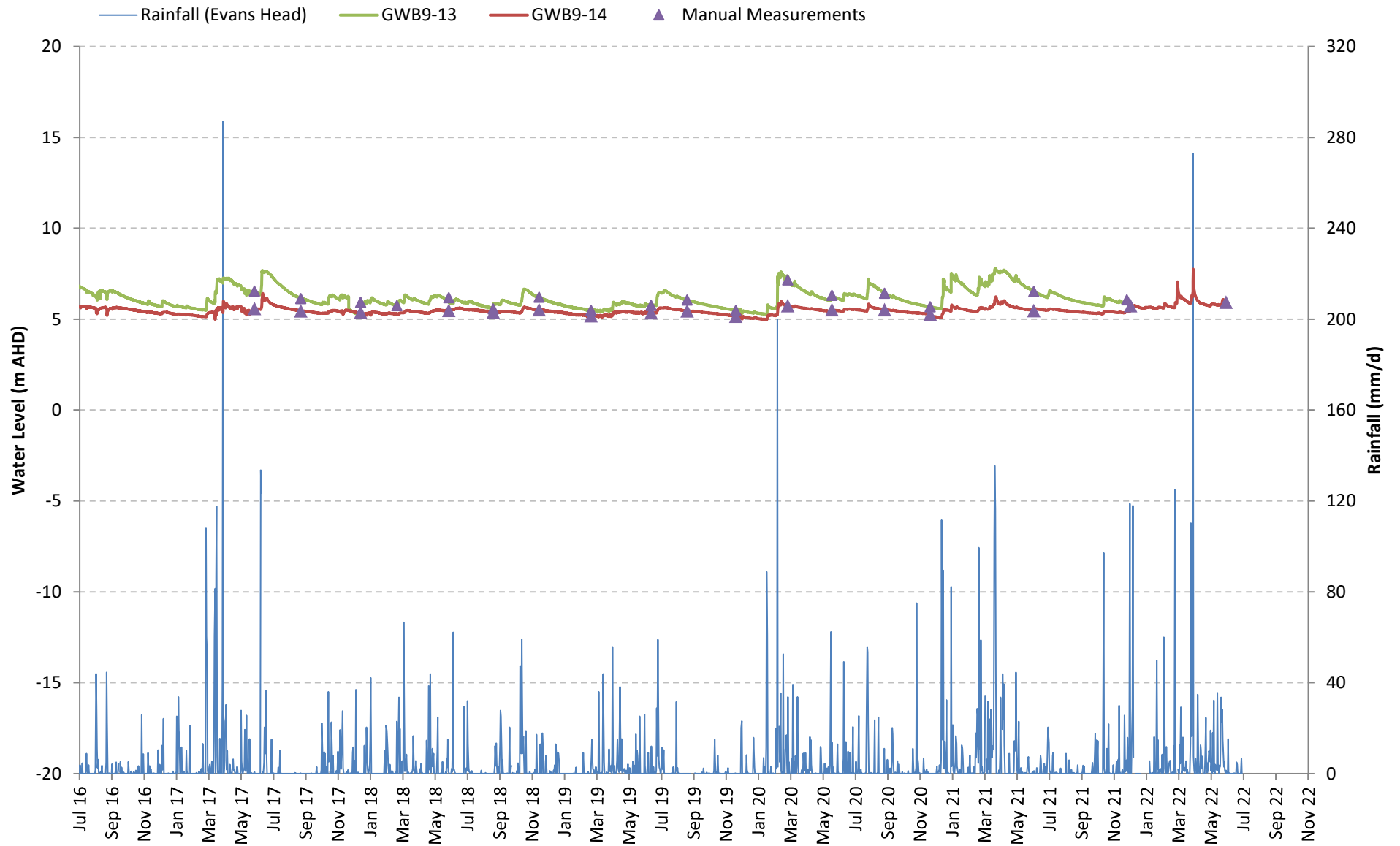
GWB9-09 & GWB9-10 Water Levels



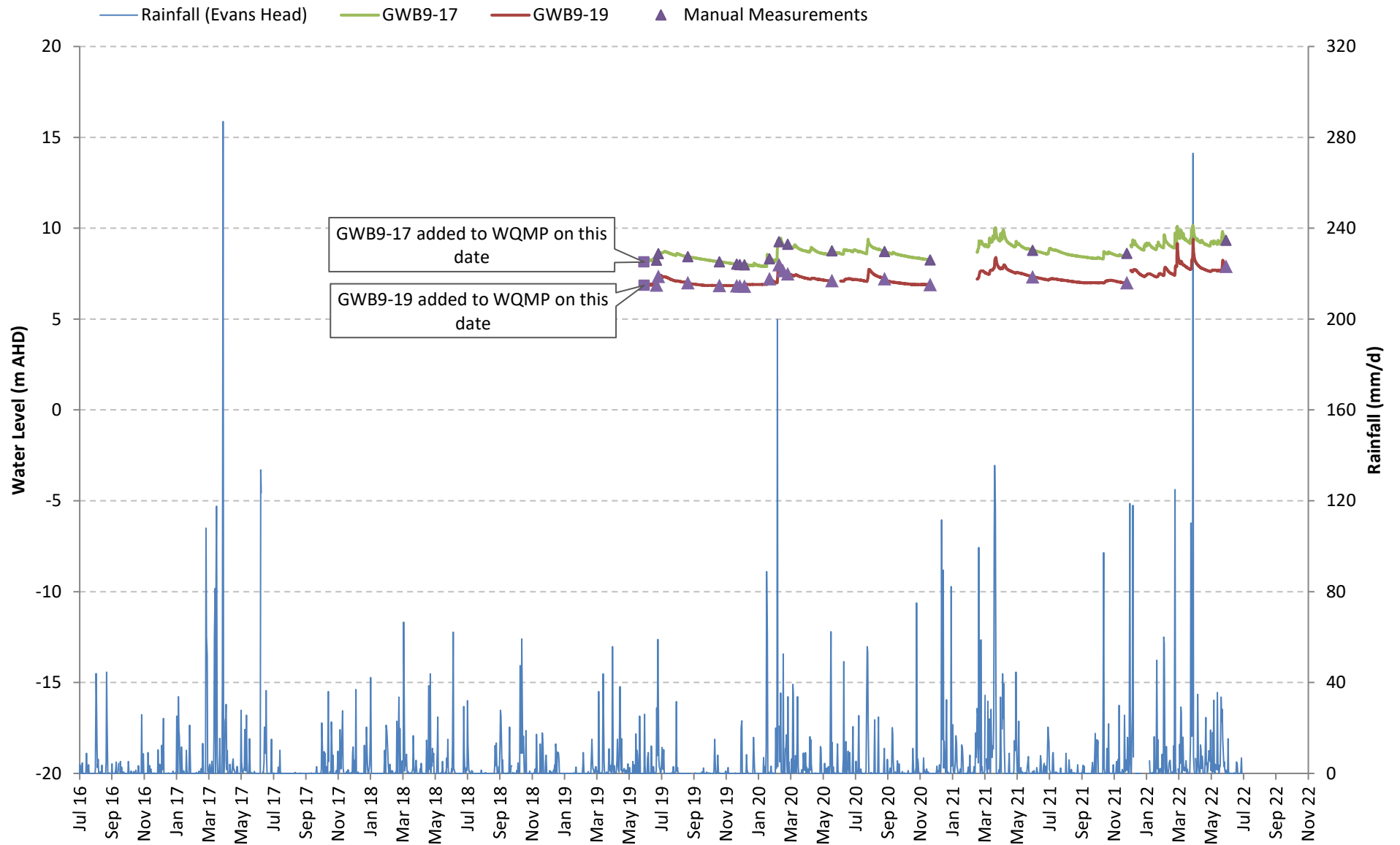
GWB9-11 & GWB9-12 Water Levels



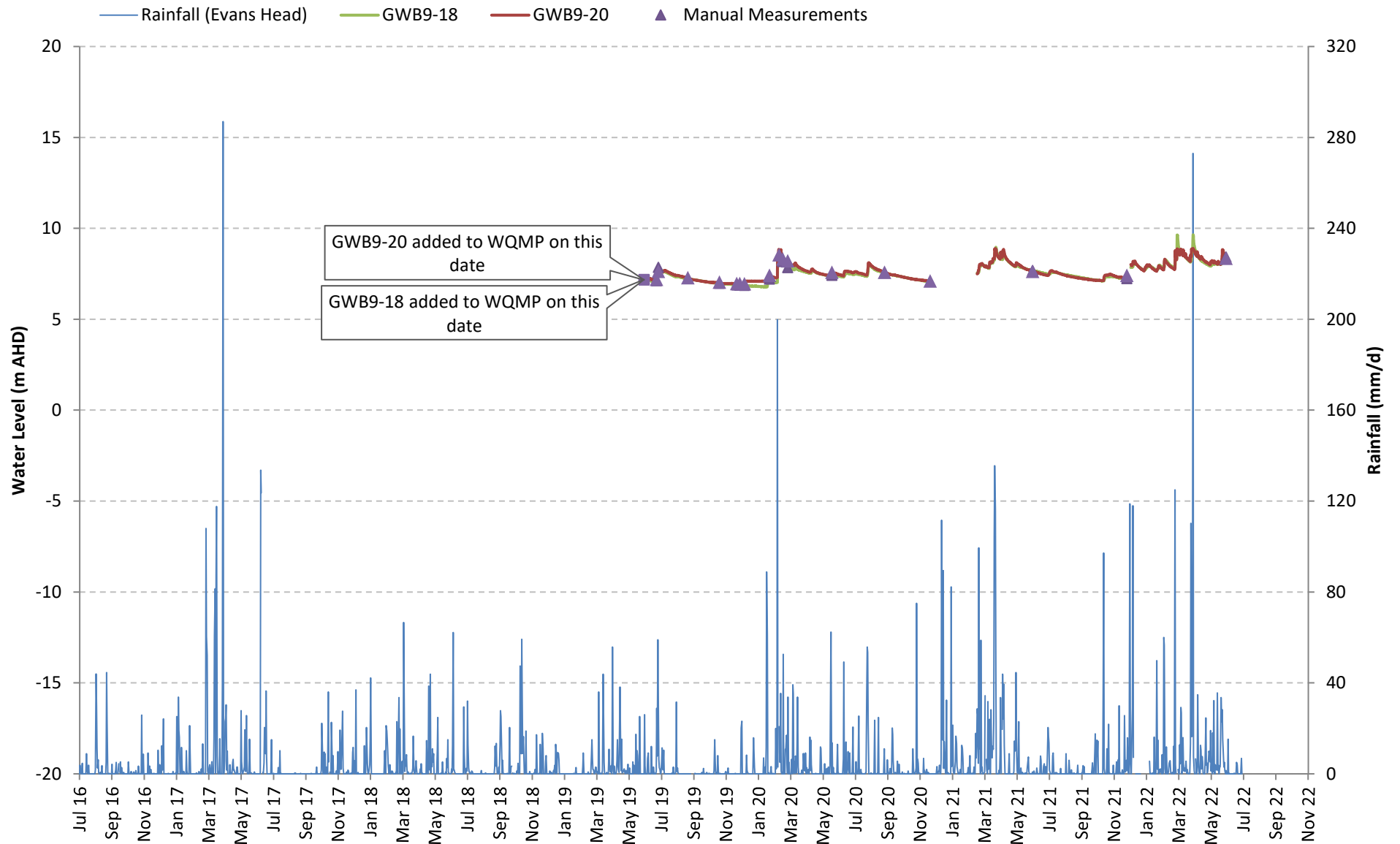
GWB9-13 & GWB9-14 Water Levels



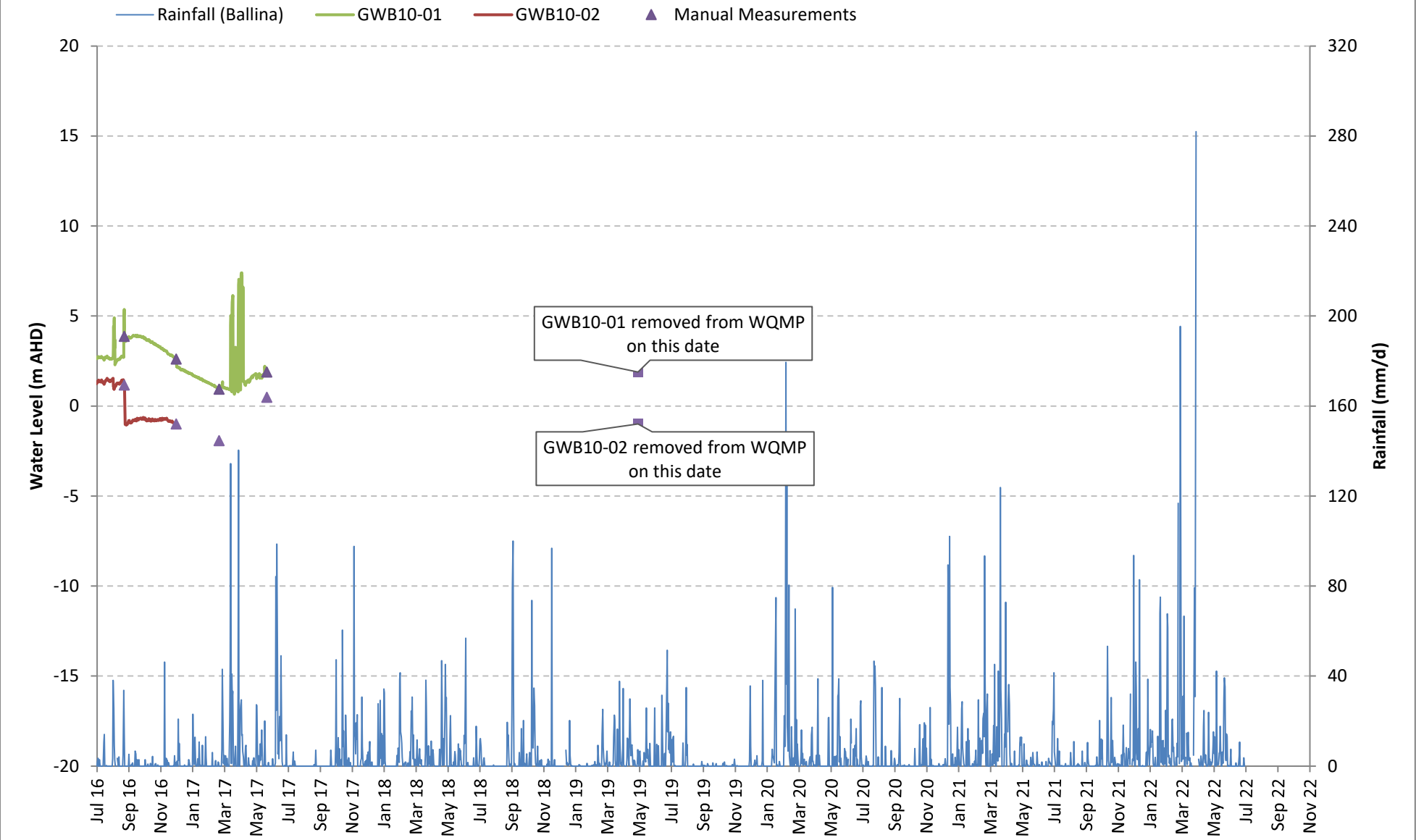
GWB9-17 & GWB9-19 Water Levels



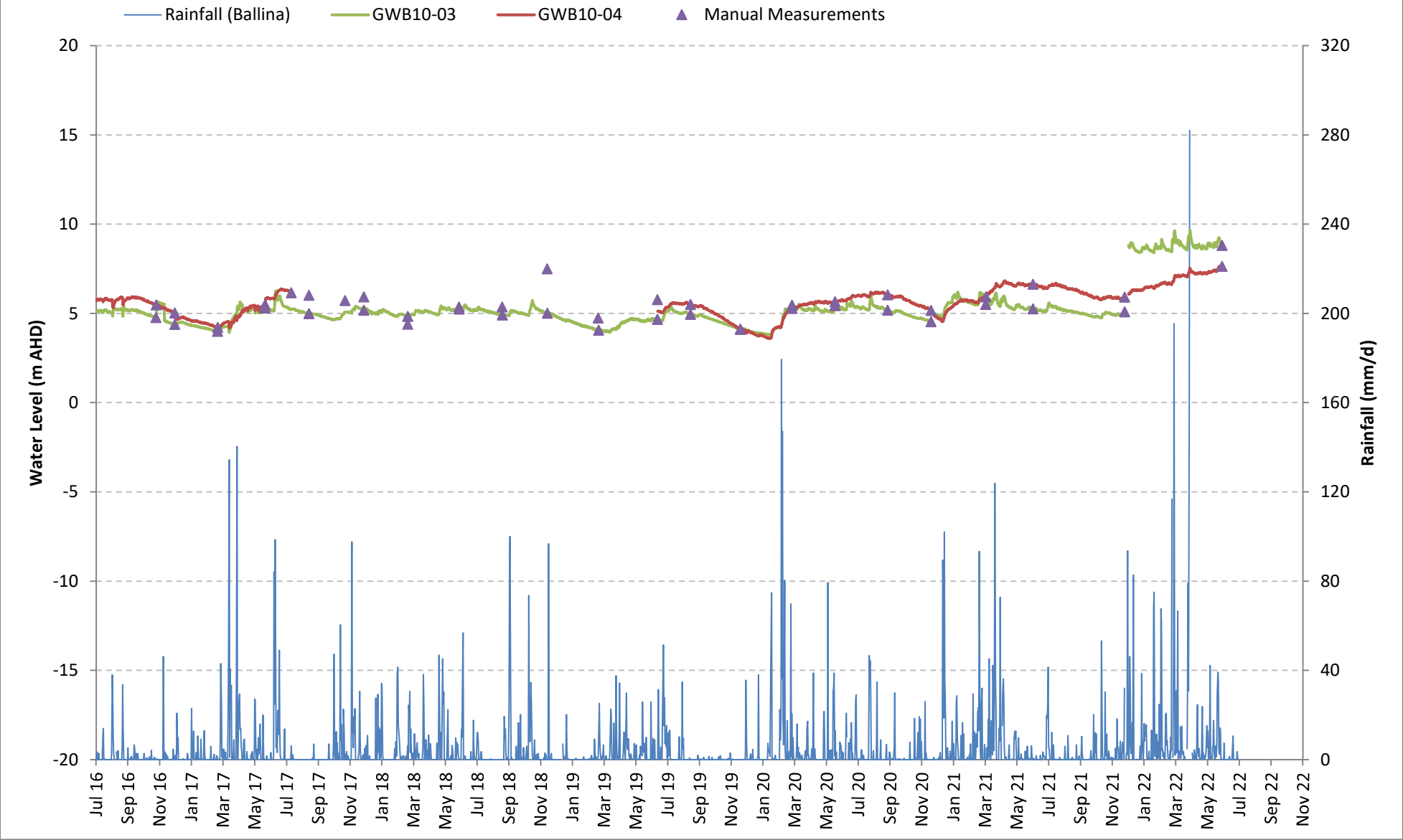
GWB9-18 & GWB9-20 Water Levels



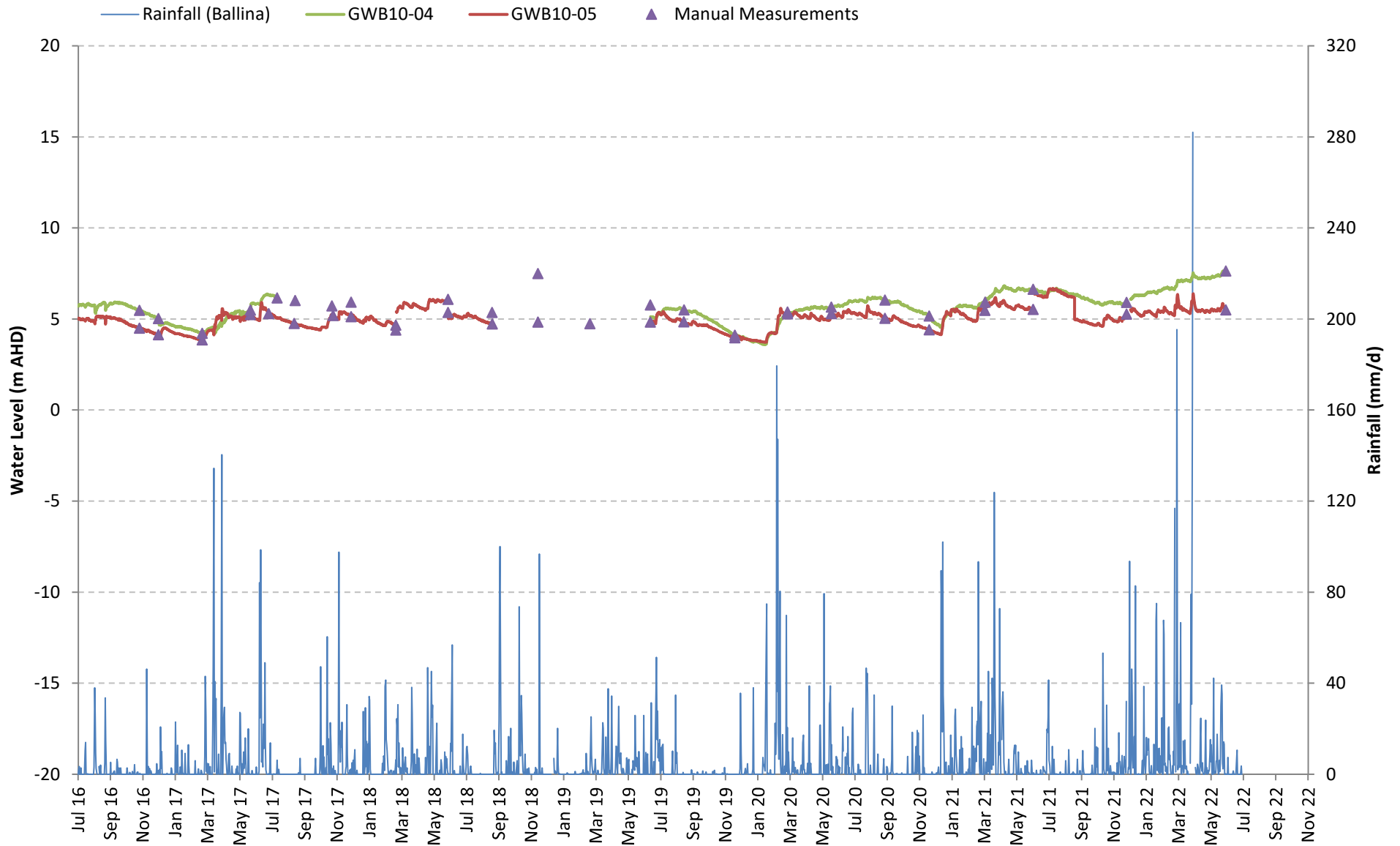
GWB10-01 & GWB10-02 Water Levels



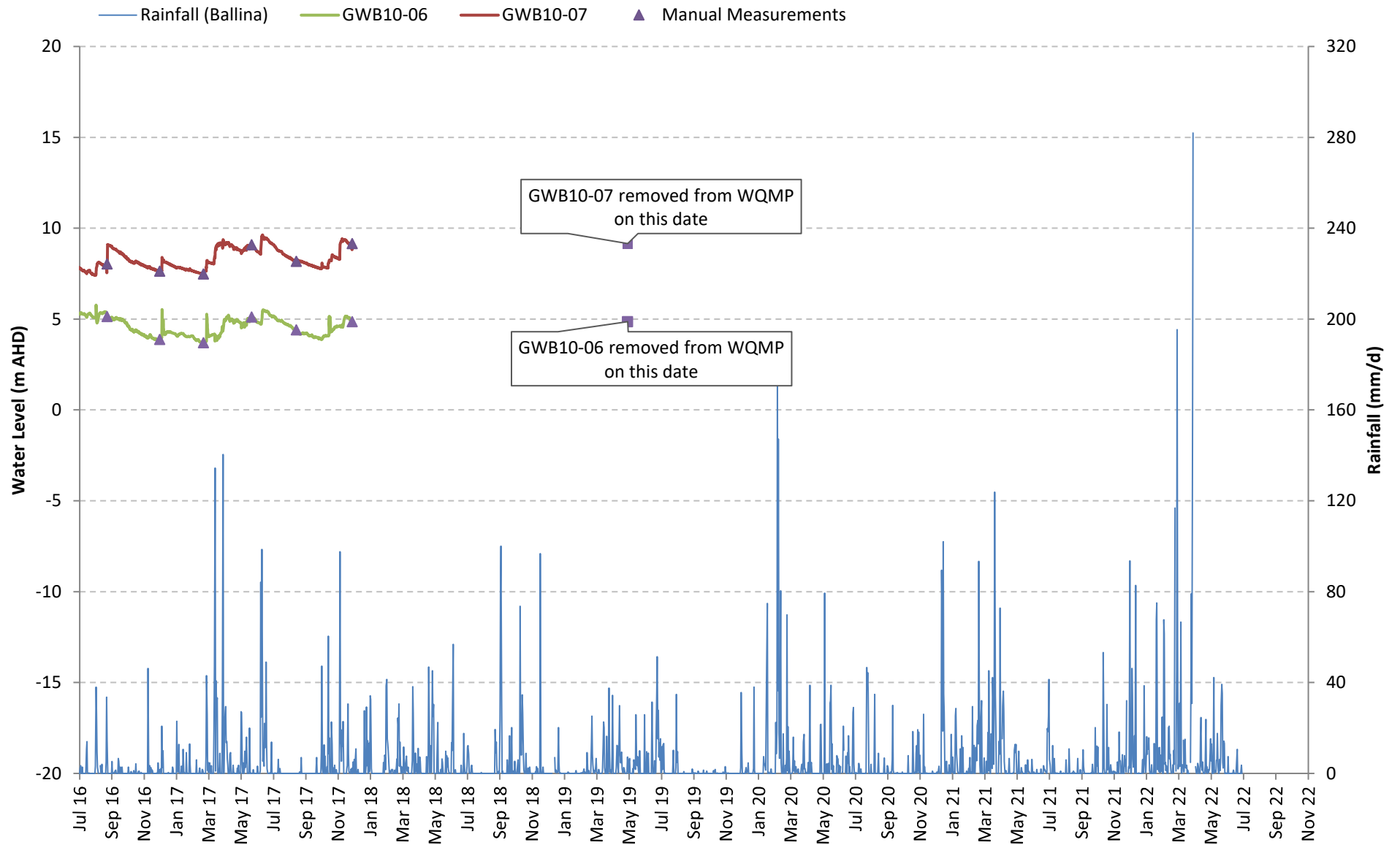
GWB10-03 & GWB10-04 Water Levels



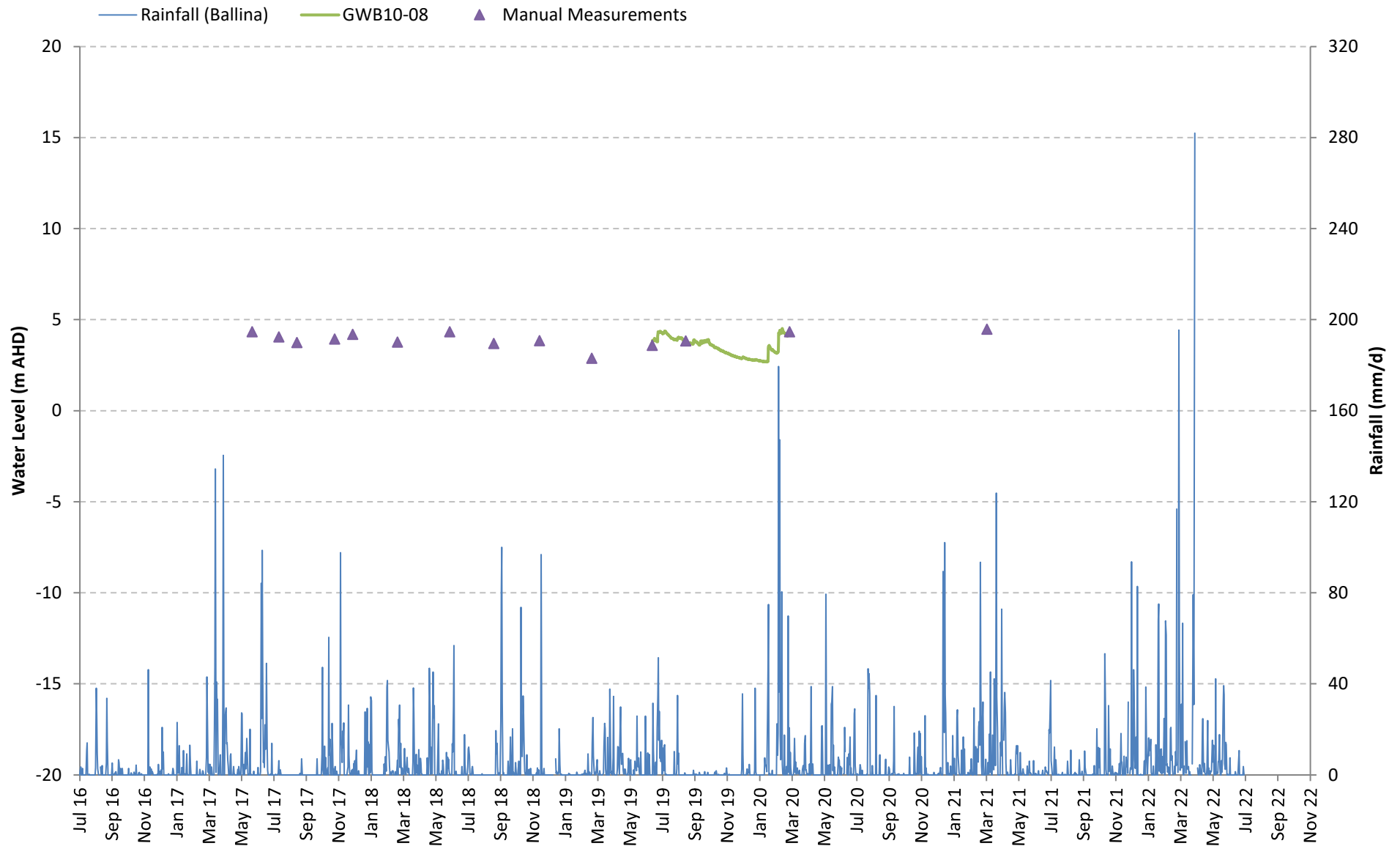
GWB10-04 & GWB10-05 Water Levels



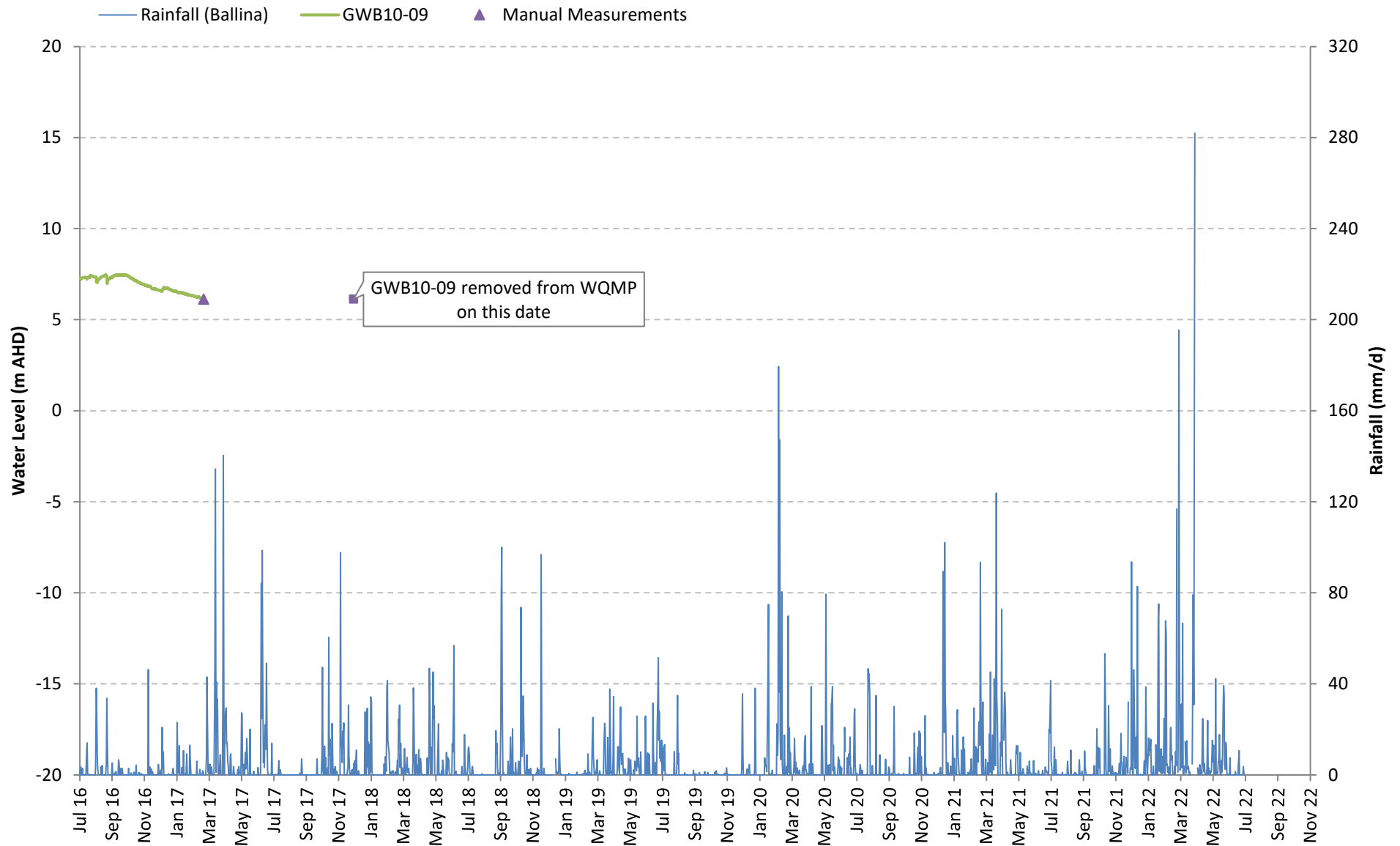
GWB10-06 & GWB10-07 Water Levels



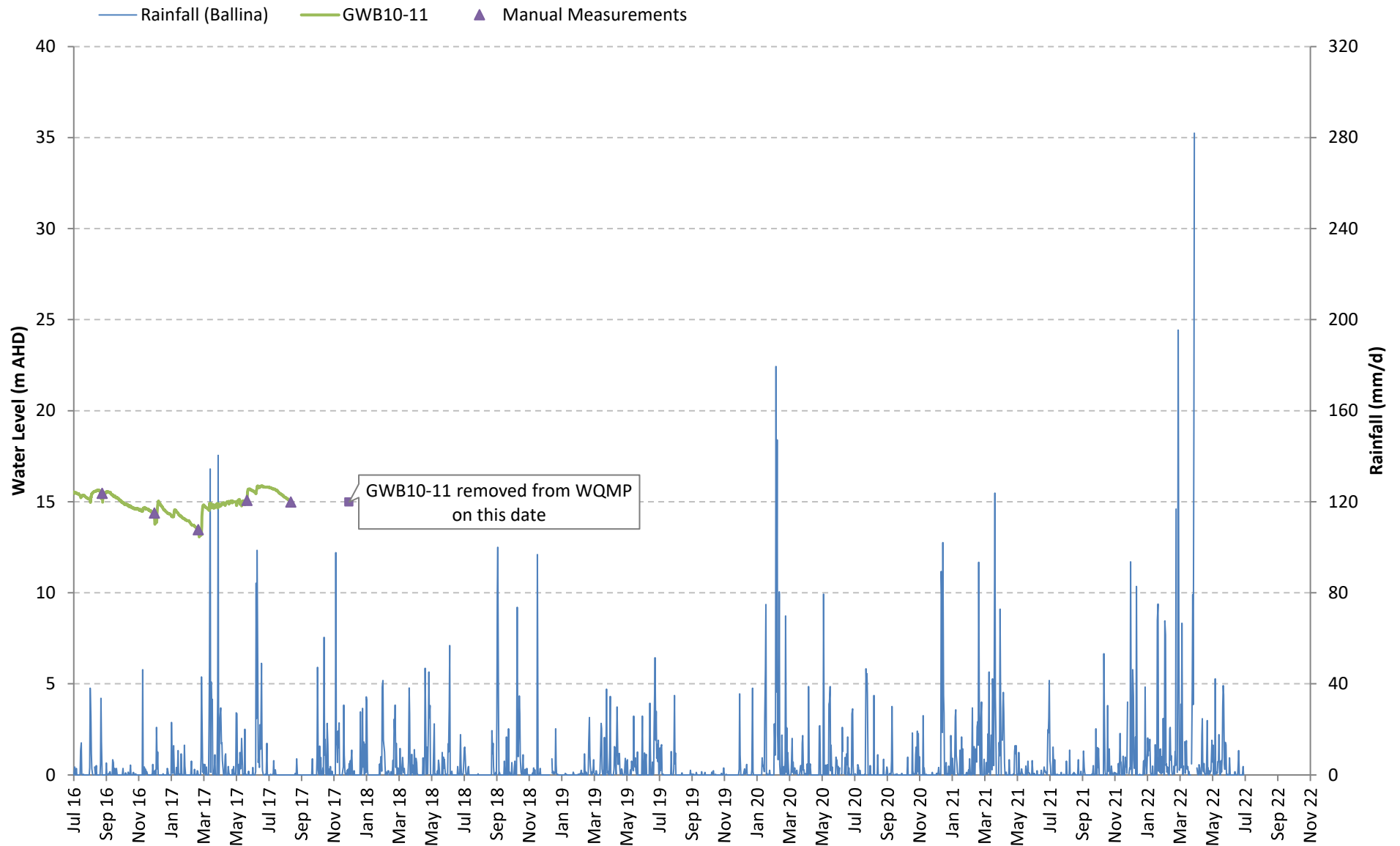
GWB10-08 Water Level



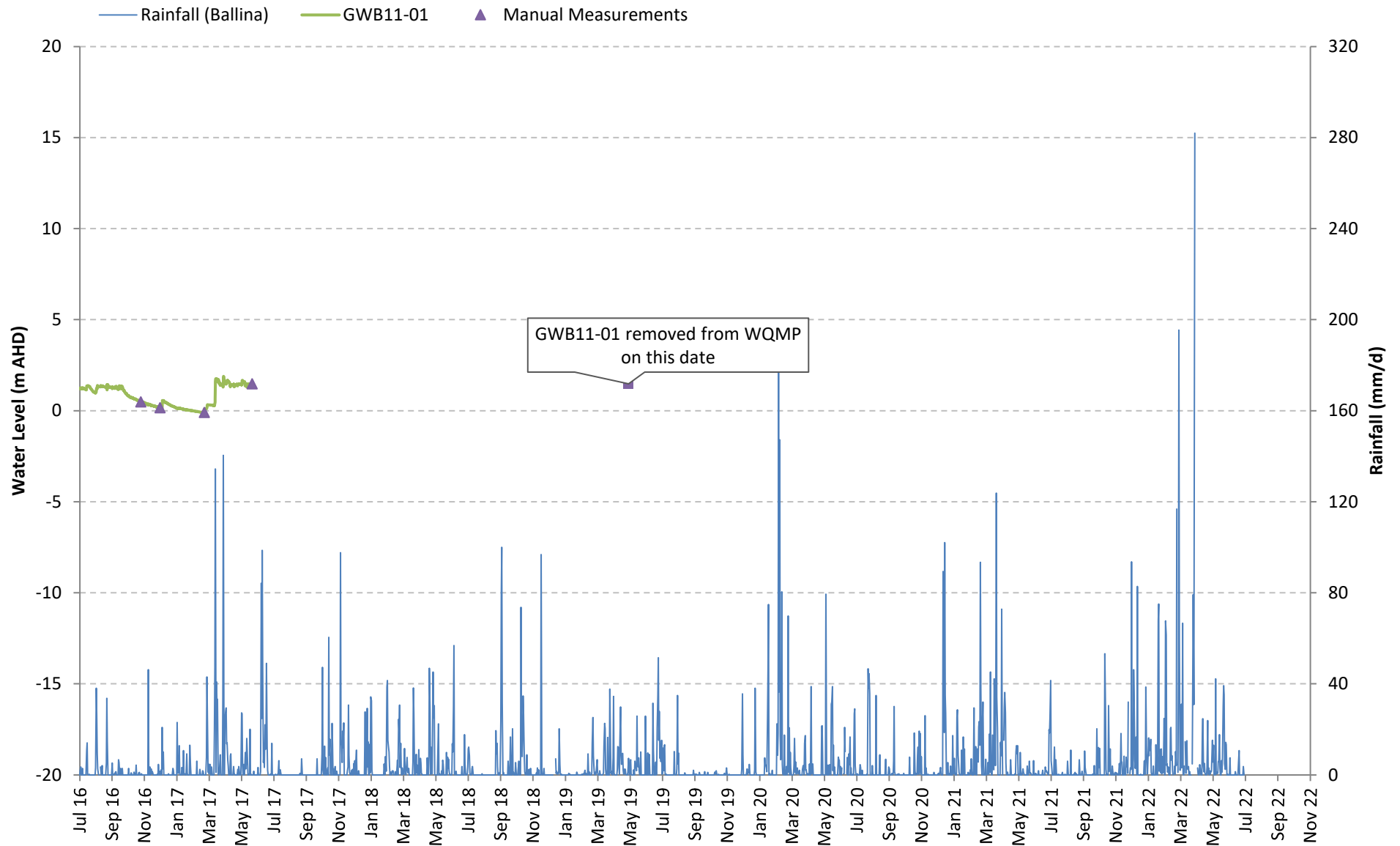
GWB10-09 Water Level



GWB10-11 Water Level



GWB11-01 Water Level



GWB11-03 Water Level

