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Fairfield City Council

Annual Environmental Monitoring Report 2023/2024

Sustainable Resource Centre

11 November 2024

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Annual Environmental Monitoring Report 2023/2024

Sustainable Resource Centre

SUBMITTED TO:
Fairfield City Council
Administration Centre
86 Avoca Rd
Wakeley NSW 2176

WSP
Level 27, 680 George Street
Sydney NSW 2000
GPO Box 5394
Sydney NSW 2001

Tel: +61 2 9272 5100
Fax: +61 2 9272 5101

wsp.com

Rev	Date	Details
0	11 November 2024	

WSP acknowledges that every project we work on takes place on First Peoples lands.
We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

Table of Contents

1 Introduction

WSP Australia Pty Ltd (WSP Golder) presents this report summarising the results of environmental monitoring undertaken at the Fairfield City Council Sustainable Resource Centre (the 'Site') located in Hassall Street, Wetherill Park for the 2023/2024 reporting year. WSP Golder was commissioned to carry out this work by Fairfield City Council (Council) following our proposal P17623136-003-P-Rev0, dated 3rd October 2013.

The site locality and site plan are presented in **Figure 1** (Appendix A). Works were carried out to perform the dust monitoring required by Environment Protection licence (EPL) No. 5713 and meet Council's internal requirements for the monitoring of groundwater and surface water at the Site.

2 Scope of Work

The environmental monitoring was carried out as follows:

- Monthly monitoring of dust deposition at five separate locations (locations DDG1 to DDG5 inclusive) with analysis comprising total insoluble solids, combustible matter and ash;
- Quarterly monitoring of 2 surface water (locations SW1 and SW2) and 3 groundwater conditions (locations GW1, GW3 and GW4); and
- Preparation of this annual report summarising the works performed and documenting the data quality assessment of the laboratory analytical results.

3 Methodology

3.1 Dust Monitoring

The monthly dust monitoring was conducted for 12 consecutive months between the period October 2023 to September 2024. Five dust monitoring locations were monitored for insoluble solids, combustible matter and ash in general accordance with AS/NZS 3580.10.1: 2016 Methods for sampling and analysis of ambient air - Determination of particulate matter – Deposited matter – Gravimetric method. Two litre dust deposit gauge bottles were collected from each location and replaced by clean two litre dust gauge bottles (containing copper sulfate solution). The bottles were labelled with the job number, sample location, date of drop off/collection. The amber bottles were transported to Australian Laboratory Services (ALS) under chain of custody procedures for analysis.

Note that AS/NZS 3580.10.1 (2016) states that the dust exposure period for monitoring programs should be 30±2 days. The exposure period for dust samples collected in November 2023, January 2024, and February 2024 was 33 days. However, results are within historical range and therefore these exceedances are not considered to have compromised the data collected.

3.2 Groundwater Monitoring

Groundwater monitoring was conducted on a quarterly basis on 14th September and 15th December 2023 and on 21st March and 24th June 2024.

Prior to groundwater sampling, the depth to groundwater was measured with an electronic water level gauge. Sampling was conducted using a low-flow peristaltic pump at the locations and purging continued until indicator parameters (pH, redox potential, electrical conductivity (EC), dissolved oxygen (DO) and temperature) had stabilised. Low-flow sampling is considered best-practice as the reduced flow rate (~0.1 to 0.3 L/min) minimises the loss of volatiles from the sample matrix.

Groundwater samples were collected in sample containers provided by the laboratory.

3.3 Surface Water Monitoring

Surface water monitoring was conducted on the same dates as the groundwater monitoring. Samples were collected directly from the water body into new sample containers provided by the laboratory.

During the sampling process, indicator parameters (pH, temperature, EC, redox potential and DO) were measured by placing the probe directly into the surface water body.

3.4 Analytical Schedule

Primary samples were submitted to Australian Laboratory Services (ALS) for chemical analyses of analytes listed in **Tables 2** and **3** in Appendix B. ALS is accredited by the National Association of Testing Authorities, Australia (NATA) for the analyses performed. The analytical methods employed are identified in the laboratory certificates (Appendix C).

The sampling procedures were in general accordance with *AS/NZS 5667.1: 1998 (R2016) Water Quality - Sampling Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples* and *AS/NZS 5667.10:1998 (R2016) Water Quality - Sampling Part 10: Guidance on sampling of waste waters*.

3.5 Assessment Criteria

The results of the field monitoring and laboratory analysis were interpreted by comparison with criteria from the following sources:

- *Australian and New Zealand Guidelines for Fresh and Marine Water Quality,* Australian and New Zealand Governments, 2018 (ANZG 2018). Trigger values for toxicants in freshwater (at the 95% protection of species level) were used to assess inorganic and organic compounds in groundwater and surface water. ANZG 2018 refers to the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand (ANZECC 2000) for physical and chemical stressors. The default trigger values for physical and chemical stressors for slightly disturbed ecosystems (lowland rivers) have been used to assess pH, EC and nitrate and nitrite in the groundwater and surface water; and
- *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW*, NSW Environment Protection Authority, 2016 (EPA 2016). Deposited dust results were compared to the impact assessment criterion of 4 g/m^2/month for insoluble solids.

Note as there are no specific groundwater quality guidelines outlined in the site EPL No. 5713 therefore, water samples were compared to ANZG (2018) guidelines 95% protection of freshwater aquatic ecosystems trigger values. These values are relevant for receiving waters and are used as screening criteria in the absence of any specific ground and surface water quality guidelines.

3.6 Quality Assurance / Quality Control (QA/QC)

3.6.1 Data Quality Objectives (DQOs)

The DQO's for this investigation were as follows:

- Accuracy to be in the range specified by ALS and SGS for spike recovery;
- Reproducibility to be within the laboratory control limits as specified by ALS and SGS for internal laboratory duplicates;

- Method blanks below the laboratory analysis limit of reporting (LOR); and
- LORs should be a maximum of 1/5, and preferably 1/10 of the assessment criteria concentration.

3.6.2 Field QA/QC

The fieldwork for this investigation was performed in accordance with WSP Golder Standard Quality Procedures and by qualified field staff. This included calibration of field instruments prior to use, collection of samples in new containers supplied by the laboratory, preservation of samples in ice chests and transport of samples to the contract laboratories under chain of custody documentation.

The internal NATA accredited laboratory QA/QC results are presented within the laboratory certificates (Appendix C) and are considered acceptable based on the control sample results.

4 Results

4.1 Rainfall

A summary of the monthly rainfall totals is presented below in Table A. Monthly rainfall data was obtained from the Bureau of Meteorology Horsley Park weather station. The long-term averages were obtained from the nearby Prospect Reservoir weather station which has recorded rainfall data since 1887. Below average total rainfall was reported for the entire twelve-month period. November and December 2023, February, April, and June 2024 recorded above average rainfall. The remaining months recorded below average rainfall.

Table A: Rainfall Data

Month	Horsley Park rainfall 2023-2024 (mm)	Long term average rainfall for Prospect Reservoir (mm)
October 2023	23.0	59.9
November 2023	87.8	73.0
December 2023	117.4	75.7
January 2024	86.8	95.2
February 2024	100.8	99.0
March 2024	27.6	102.5
April 2024	190.0	76.5
May 2024	0.0	68.7
June 2024	110.6	75.9
July 2024	36.0	57.7
August 2024	11.8	49.9
September 2024	42.2	46.2
Rainfall	**834**	**880.4**

4.2 Field Results

4.2.1 Groundwater Conditions

Groundwater field parameter results are presented in **Table 1** (Appendix B) and are discussed below. Note that the final stabilised parameters are presented below.

Water Levels: The static water levels ranged at each location as follows:

- GW1 – 1.25 metres below top of casing (mBTOC) (June 2024) to 3.95 mBTOC (March 2024).
- GW3 – between 1.35 mBTOC (September 2023) to 2.06 mBTOC (June 2024).
- GW4 – between 2.45 mBTOC (September 2023) to 4.30 mBTOC (June 2024).

pH: The field pH values ranged at each location as follows:

- GW1 – 6.60 (September 2023) to 7.68 (December 2023).
- GW3 – 5.62 (December 2023) to 7.67 (September 2023).
- GW4 – 6.08 (December 2023) to 7.24 (March 2024).

The pH result in groundwater were within the ANZG (2018) criterion range of 6.5 to 8.0 pH units for the monitoring rounds with the exception of GW3 in December 2023, and GW4 in December 2023. The pH results indicate that the groundwater is generally neutral, however pH levels at GW3 and GW4 in December 2023 indicate neutral to slightly acidic waters.

Temperature: The field temperature ranges reported for each location are as follows:

- GW1 – 18.1˚C (June 2024) to 27.6˚C (December 2023).
- GW3 – 16.9˚C (June 2024) to 23.9˚C (December 2023).
- GW4 – 19.2˚C (September 2023) to 23.0˚C (December 2023).

Temperatures can be variable however, generally relate to the ambient air temperatures at the time of monitoring.

Electrical Conductivity: The electrical conductivity ranges reported for each location are as follows:

- GW1 – 874 µS/cm (September 2023) and 1,294 µS/cm (June 2024).
- GW3 – 2 µS/cm (December 2024) and 2,957 µS/cm (June 2024).
- GW4 – 84 µS/cm (December 2023) and 10,239 µS/cm (June 2024).

Electrical conductivities at GW4 during all monitoring rounds and GW3 during December 2023 and March 2024 monitoring rounds were outside the recommended ANZG 2018 criterion range of 125 to 2,200 µS/cm. Waters have ranged from fresh to brackish at each location.

Redox Potential: The field redox ranges reported for each location are as follows:

- GW1 – ranged between -175.1 mV (June 2024) and -34.0 mV (December 2023).
- GW3 – ranged between -116.2 mV March 2024) and 135.8 mV (December 2023).
- GW4 – ranged between -146.1 mV (December 2023) and -27.0 mV (September 2023).

Redox potential generally indicated a mild reducing environment during the monitoring period.

Dissolved Oxygen: The field DO concentration ranges reported for each location was as follows:

- GW1 – 0.05 mg/L (June 2024) to 5.08 mg/L (December 2023).
- GW3 – 0.90 mg/L (June 2024) to 9.53 mg/L (December 2023).
- GW4 – 0.56 mg/L (September 2023) to 9.05 mg/L (December 2023).

Dissolved oxygen values indicate a generally oxygen deficient environment.

4.2.2 Surface Water Conditions

Surface water field parameter results are presented in **Table 1** (Appendix B) and are discussed below. Surface water sample location SW1 is considered to be up-gradient from the site whilst location SW2 is downgradient. Water quality parameters were taken by directly placing the probe into the water body.

pH: The field pH values varied between locations and sampling events. Those values ranged from pH 7.14 (September 2023) to pH 7.68 (December 2023) at SW1 and from pH 5.62 (December 2023) to pH 7.01 (September 2023) at SW2 indicating that the water is generally neutral at SW1 and neutral to slightly acidic at SW2. The pH values were within the recommended ANZG 2018 pH criterion range (6.5 – 8.0), except for SW2 in December 2023.

Temperature: The field temperature values ranged from 11.9˚C (June 2024) to 26.6˚C (December 2023) at SW1 and from 10.0˚C (June 2024) to 24.8˚C (December 2023) at SW2. Temperatures reported are variable, however, they are generally reflective of ambient temperature at the time of sampling.

Electrical Conductivity: The field EC values ranged between 586 µS/cm (June 2024) and 1,021 µS/cm (September 2023) at SW1 and from 2 µS/cm (December 2023) and 673 µS/cm (December 2023) at SW2. Surface waters were generally fresh to slightly brackish. EC values were within the recommended ANZG 2018 criterion range of 125 to 2,200 µS/cm with the exception of SW2 during the December 2023 monitoring round.

Redox Potential: The field redox values ranged from -34.0 mV (September and December 2023) to 32.7 mV (June 2024) at SW1 and from -178.9 mV (June 2024) to -69.0 mV (September 2023) at SW2. Redox potential generally indicated a reducing environment during the monitoring period.

Dissolved Oxygen: The field DO concentrations ranged from 3.21 mg/L (March 2024) to 8.29 mg/L (June 2024) at SW1 and from 0.13 mg/L (June 2024) to 1.78 mg/L (September 2023) at SW2. Dissolved oxygen values indicate a generally oxygen deficient environment.

4.3 Analytical Laboratory Results

Laboratory analytical results are summarised in **Tables 2**, **3** and **4** in Appendix B and a factual discussion of the results is presented in the following sections. Laboratory certificates are presented in Appendix C.

4.3.1 Dust

The monthly dust monitoring was conducted for 12 consecutive months between the period October 2023 to September 2024 generally in accordance with AS/NZS 3580.10.1: 2016.

Insoluble matter: Insoluble solids ranged from <0.1 g/m²/month at DDG5 in July 2024 to 5.1 g/m²/month at DDG4 in December 2023. Exceedances of the adopted criterion (4.0 g/m²/month) were reported for the monitoring period, including:

- DDG2 – 4.1 g/m²/month in December 2023; and
- DDG4 – 5.1 g/m²/month in December 2023, respectively.

Combustible matter: Combustible matter ranged from <0.1 g/m²/month (LOR) at DDG5 in June 2024, July 2024, and August 2024 to 1 g/m²/month at DDG2 in January 2024, and DDG4 in April 2024. No criterion is available for combustible matter.

Ash: Ash content ranged from <0.1 g/m²/month at DDG5 in July 2024 to 2.4 g/m²/month at DDG1 in October 2024. No criterion is available for ash content.

4.3.2 Groundwater

Heavy Metals: Manganese results at monitoring location GW4 in September 2023, December 2023, and June 2024 exceeded the adopted assessment criterion (1.9 mg/L) for dissolved and total manganese. Manganese results at monitoring location GW1 in March 2024 exceeded the adopted assessment criteria for dissolved manganese. These values remain within the historical range of reported results.

Total iron concentrations ranged from 0.65 mg/L (LOR) at GW4 in September 2023 to 9.15 mg/L at GW1 in December 2023. Dissolved iron concentrations ranged from <0.05 mg/L (LOR) at GW1 in September 2023, and June 2024, GW3 in September 2023, and GW4 in September 2023, December 2023, and June 2024 to 2.75 mg/L at GW3 in March 2024.

Nitrate, Nitrite & Ammonia: Ammonia criterion exceedances were reported at in September 2023, December 2023, and June 2024 at GW1, and March 2024 at GW3. The other locations reported concentrations above the LOR but were below the adopted assessment criterion (0.9 mg/L).

Nitrate plus nitrite criterion exceedances were reported at GW1 in December 2023, and March 2024, GW3 in all monitoring rounds, and GW4 in December 2023, March 2024 and June 2024. These values are within the historical range of reported results.

Total Organic Carbon (TOC): TOC concentrations ranged from 10 mg/L at GW1 and GW4 in June 2024 to 50 mg/L at GW3 (September 2023).

Volatile Organic Compounds (VOCs): The concentrations for VOCs were reported to be below the respective LORs and therefore no exceedances of the adopted assessment criteria were reported.

4.3.3 Surface Water

Heavy Metals: There were no exceedances of the adopted site criteria for manganese of 1.9 mg/L (ANZG 2018).

Total iron ranged from 0.06 mg/L at SW1 (September 2023) to 2.56 mg/L at SW2 (March 2024). Dissolved iron ranged from <0.05 mg/L at SW1 (June 2024) to 9.73 mg/L at SW2 (September 2023).

Nitrate, Nitrite & Ammonia:

Ammonia ranged from 0.02 mg/L (SW2 December 2023) to 2.13 mg/L (SW1 December 2023). Multiple exceedances of the adopted ammonia criteria (0.9 mg/L) were reported in the monitoring period including SW1 in December 2023, and SW2 in March 2024, and June 2024. However, the results remain within historical range.

The nitrate concentrations exceed the LOR (0.01 mg/L) in all monitoring rounds at SW1, and June 2024 at SW2. However, the results remain within historical range.

The SW1 and SW2 monitoring rounds exceeded the adopted nitrate plus nitrite criterion except SW2 in June 2024. Exceedances at SW1 and SW2 remain within historical range.

It appears unlikely ammonia, nitrate and nitrite exceedances are related to historical landfill activities due to the source of these concentrations in most cases being recorded at upstream location SW1.

Total Organic Carbon (TOC): TOC concentrations ranged from 10 mg/L for SW1 (March 2024, June 2024) and SW2 (June 2024) to 117 mg/L for SW2 (March 2024).

Volatile Organic Compounds (VOCs): The concentrations for VOCs were reported to be below the respective LORs and the ANZG (2018) freshwater 95% protection adopted criteria.

5 Conclusions

WSP Golder was requested to undertake monthly dust sampling and quarterly groundwater and surface water sampling at the Sustainable Resource Centre (SRC) for the 2023/2024 reporting year by Fairfield City Council. It is noted that EPL 5713 requires monitoring of deposited dust. It is understood that the sampling of groundwater and surface water is to ensure potential environmental risks from the former landfill are monitored appropriately.

Exceedances of the adopted criteria are summarised as follows:

- Dust exceedances of the adopted insoluble matter assessment criteria (4.0 g/m^2/month) occurred at:
  - DDG2 – 4.1 g/m^2/month in December 2023; and
  - DDG4 – 5.1 g/m^2/month in December 2023, respectively.

- Groundwater
  - Ammonia criterion exceedances were reported at in September 2023, December 2023, and June 2024 at GW1, and March 2024 at GW3. The other locations reported concentrations above the LOR but were below the adopted assessment criterion (0.9 mg/L).
  - Nitrate plus nitrite criterion exceedances were reported at GW1 in December 2023, and March 2024, GW3 in all monitoring rounds, and GW4 in December 2023, March 2024 and June 2024. These values are within the historical range of reported results.
  - Manganese results at monitoring location GW4 in September 2023, December 2023, and June 2024 exceeded the adopted assessment criterion (1.9 mg/L) for dissolved and total manganese. Manganese results at monitoring location GW1 in March 2024 exceeded the adopted assessment criteria for dissolved manganese. These values remain within the historical range of reported results.
  - Electrical conductivities at GW4 during all monitoring rounds and GW3 during December 2023 and March 2024 monitoring rounds were outside the recommended ANZG 2018 criterion range of 125 to 2,200 µS/cm.
  - The pH result in groundwater were within the ANZG (2018) criterion range of 6.5 to 8.0 pH units for the monitoring rounds with the exception of GW3 in December 2023, and GW4 in December 2023.

- Surface Water
  - Multiple exceedances of the adopted ammonia criteria (0.9 mg/L) were reported in the monitoring period including SW1 in December 2023, and SW2 in March 2024, and June 2024. However, the results remain within historical range.
  - The nitrate concentrations exceed the LOR (0.01 mg/L) in all monitoring rounds at SW1, and June 2024 at SW2. However, the results remain within historical range.
  - The SW1 and SW2 monitoring rounds exceeded the adopted nitrate plus nitrite criterion except SW2 in June 2024. Exceedances at SW1 and SW2 remain within historical range.
  - The pH values were within the recommended ANZG 2018 pH criterion range (6.5 – 8.0), except for SW2 in December 2023.
  - EC values were within the recommended ANZG 2018 criterion range of 125 to 2,200 µS/cm with the exception of SW2 during the December 2023 monitoring round.

It is considered that the monitoring works carried out during the 2023/2024 monitoring period were in accordance with the requirements of Environment Protection licence (EPL) No. 5713 and meet Council's internal requirements for the monitoring of groundwater and surface water at the Site.

6 Important Information

Your attention is drawn to the document titled - “Important Information Relating to this Report”, which is included in Appendix D of this report. The statements presented in that document are intended to inform a reader of the report about its proper use. There are important limitations as to who can use the report and how it can be used. It is important that a reader of the report understands and has realistic expectations about those matters. The Important Information document does not alter the obligations WSP Golder has under the contract between it and its client.

7 References

ANZECC 2000 — *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, 2000.

ANZG 2018 — *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, Australian and New Zealand Governments, 2018.

AS/NZS 3580.10.1 — *AS/NZS 3580.10.1: 2016 Methods for sampling and analysis of ambient air Method 10.1: Determination of particulate matter – Deposited matter – Gravimetric method*, Standards Australia, 2016.

AS/NZS 5667.1 — *AS/NZS 5667.1: 1998 (R2016) Water Quality - Sampling Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples*, Standards Australia, 1998.

AS/NZS 5667.10 — *AS/NZS 5667.10:1998 (R2016) Water Quality - Sampling Part 10: Guidance on sampling of waste waters*, Standards Australia, 1998.

EPA 2016 — *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*, Environment Protection Authority, 2016.

NIWAR 2013 — *Updating nitrate toxicity effects on freshwater aquatic species*, National Institute of Water & Atmospheric Research Ltd, January 2013.

Appendix A

Figure

306,800 307,000 307,200 307,400 307,600

6,254,200 6,254,000 6,253,800 6,253,600

QUARRY RD
THE BLACK L
LPT TRANSITWAY
HYLAND RD
DAVIS RD
WIDEMERE RD
CANAL ST
HASSALL ST

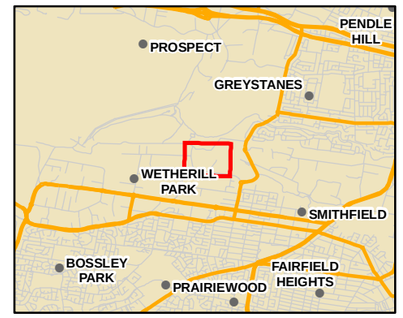
SW1
GW1
DDG1
DDG2
SW2
GW3
GW4
DDG3
DDG4
DDG5

N

ENVIRONMENTAL MONITORING WETHERILL PARK

FAIRFIELD CITY COUNCIL

ENVIRONMENTAL MONITORING LOCATIONS



LEGEND

- Surface Water Monitoring
- Dust Monitors
- Ground Water Monitoring

NOTES

Environmental monitoring locations provided by client.

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1. Imagery Copyright (c) 2010 Microsoft Corporation and its data suppliers

2. Base map data copyright MapInfo Australia Pty Ltd

0 15 30 60 90 120 150 metres

SCALE (at A3) 1:3,000

Coordinate System: GDA 1994 MGA Zone 56

PROJECT: **117623088**
DATE: **1/09/2019**
DRAWN: **KS**
CHECKED: **IW**

FIGURE 1

Golder Associates

File Location: J:\env\2011\117623088_FCC_Enviro Monitoring_Wetherill Park\Technical Doc\GIS\Project\117623088_F0001_Rev1.mxd

Appendix B

Summary Tables

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
Field parameters

Fairfield City Council

Environmental Monitoring, FFCSRC, Wetherill Park

Sample Location	Sample Date	SWL before sampling	Disolved Oxygen	Conductivity	pH	Redox potential (ORP)	Eh	Temperature
		m BTOC	mg/L	µs/cm	pH Units	mV	mV	^{o}C
Ground Water								
GW1	16/09/11	2.05	0.00	2500	6.84	-193.0	6.0	21.0
GW1	13/01/12	2.83	2.12	1213	7.43	-129.0	70.0	21.7
GW1	22/03/12	1.71	1.12	1921	6.75	-135.0	64.0	20.4
GW1	22/06/12	2.01	1.31	1973	6.83	-93.0	106.0	17.3
GW1	18/09/12	3.30	-	-	-	-	-	-
GW1	20/12/12	3.50	2.98	2147	7.05	-122.0	77.0	24.9
GW1	20/03/13	2.72	0.32	1398	6.92	-322.0	-123.0	24.3
GW1	17/06/13	3.10	0.28	1966	6.84	-154.0	45.0	20.8
GW1	18/09/13	3.35	0.06	1429	6.97	-150.0	49.0	18.7
GW1	16/12/13	3.35	0.67	1858	7.20	-197.0	2.0	22.3
GW1	14/03/14	3.53	0.72	1919	6.76	-152.1	46.9	22.5
GW1	16/06/14	3.39	2.71	1927	6.71	-138.0	61.0	20.9
GW1	26/09/14	3.50	0.62	2800	7.05	-123.3	75.7	20.4
GW1	16/12/14	1.21	0.39	1432	6.86	-154.6	44.4	21.0
GW1	16/03/15	3.16	0.16	1661	6.84	-215.0	-16.0	21.8
GW1	15/06/15	2.76	0.21	1914	7.04	-215.6	-16.6	19.5
GW1	14/10/15	3.21	1.02	1529	6.95	-63.0	136.0	20.3
GW1	11/12/15	3.23	0.23	1719	7.04	-173.7	25.3	23.7
GW1	29/03/16	3.28	1.06	1641	6.64	-236.0	-37.0	20.6
GW1	15/06/16	2.16	0.20	1287	7.05	-86.6	112.4	18.8
GW1	15/09/16	2.25	0.19	1532	7.11	-55.4	143.6	18.6
GW1	15/12/16	3.64	0.09	1493	6.66	-174.6	24.4	18.6
GW1	15/03/17	0.75	0.36	1747	6.97	-162.2	36.8	21.2
GW1	15/06/17	1.05	0.14	1987	6.75	-151.8	47.2	17.0
GW1	15/09/17	3.56	-	1697	6.89	-170.2	28.8	19.3
GW1	15/12/17	3.89	1.01	1757	7.07	-26.8	172.2	19.9
GW1	15/03/18	3.75	0.11	1904	6.67	-239.8	-40.8	21.5
GW1	15/06/18	3.22	0.55	1767	6.68	-107.0	92.0	17.2
GW1	13/09/18	3.33	1.10	1909	6.60	-244.0	-45.0	20.9
GW1	13/12/18	3.27	0.33	2209	7.00	-179.5	19.5	20.7
GW1	14/03/19	3.21	0.16	2290	6.97	-315.3	-116.3	21.9
GW1	13/06/19	3.15	0.35	2133	6.73	-241.8	-42.8	20.8
GW1	17/09/19	-	0.22	2102	6.99	-223.0	-24.0	18.1
GW1	16/12/19	-	0.30	1832	6.64	-168.8	30.2	21.4
GW1	16/03/20	-	0.05	1819	7.20	-265.1	-66.1	19.5
GW1	16/06/20	2.97	0.20	1885	7.05	-365.6	-166.6	18.2
GW1	15/09/20	2.93	0.00	1682	7.26	-192.9	6.1	20.9
GW1	17/12/20	3.35	0.15	1693	7.32	-200.8	-1.8	23.6
GW1	11/03/21	-	2.56	1411	7.23	-71.1	127.9	21.6
GW1	11/06/21	2.94	0.13	1534	7.08	-95.9	103.1	19.0
GW1	14/09/21	2.41	2.00	876	7.45	53.9	252.9	17.1
GW1	15/12/21	2.00	1.03	567	7.43	34.0	233.0	18.1
GW1	02/03/22	1.99	1.12	786	7.23	27.0	226.0	18.7
GW1	15/06/22	2.12	1.00	567	7.33	33.0	232.0	17.1
GW1	14/09/22	3.02	0.78	1400	6.76	-91.5	107.5	20.0
GW1	12/12/22	2.22	1.03	451	6.89	-67.0	132.0	20.1
GW1	20/03/23	2.67	1.02	236	6.56	-32.0	167.0	19.2
GW1	09/06/23	3.26	0.25	1149	6.67	-155.3	43.7	18.6
GW1	29/09/23	3.33	0.56	874	6.60	-134.0	78.0	19.1
GW1	15/12/23	2.92	5.08	790	7.68	-34.0	165.0	27.6
GW1	21/03/24	3.95	3.29	1078	7.09	-40.6	158.4	20.7
GW1	24/06/24	1.25	0.05	1294	6.95	-175.1	23.9	18.1
GW3	16/09/11	1.77	0.00	7290	7.23	-10.0	189.0	19.3
GW3	15/12/11	1.45	0.28	4185	6.89	-144.0	55.0	19.6
GW3	22/03/12	1.14	0.96	2730	6.96	-64.0	135.0	19.2
GW3	22/06/12	1.51	1.88	3670	7.03	3.0	202.0	17.4
GW3	18/09/12	1.55	0.78	6650	6.99	-69.0	130.0	17.6
GW3	20/12/12	2.08	0.43	6810	7.44	-142.0	57.0	21.2
GW3	20/03/13	1.37	1.19	3132	7.11	-334.0	-135.0	23.5
GW3	17/06/13	1.82	0.19	6954	7.13	-159.0	40.0	18.7

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
Field parameters
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample Location	Sample Date	SWL before sampling	Disolved Oxygen	Conductivity	pH	Redox potential (ORP)	Eh	Temperature
		m BTOC	mg/L	µs/cm	pH Units	mV	mV	^{o}C
GW3	18/09/13	1.67	0.05	5838	7.12	-125.0	74.0	17.7
GW3	16/12/13	1.77	1.13	7180	7.17	-155.0	44.0	25.0
GW3	14/03/14	2.11	1.23	6954	7.03	-168.8	30.2	22.0
GW3	16/06/14	1.67	2.47	7032	7.09	-114.0	85.0	19.8
GW3	26/09/14	1.60	0.14	6469	7.12	-162.1	36.9	19.3
GW3	16/12/14	1.06	0.30	3688	7.23	-131.2	67.8	19.0
GW3	16/03/15	1.49	0.58	5417	7.12	-127.9	71.1	19.5
GW3	15/06/15	1.22	0.24	4669	7.06	-97.5	101.5	17.9
GW3	14/10/15	1.44	0.60	5367	7.09	-82.5	116.5	17.5
GW3	11/12/15	1.52	0.35	6603	7.14	-120.0	79.0	21.6
GW3	29/03/16	1.51	0.74	5360	7.08	-155.0	44.0	20.3
GW3	15/06/16	1.25	0.70	2750	6.83	8.4	207.4	17.8
GW3	15/09/16	0.97	0.10	3135	7.24	-89.0	110.0	18.2
GW3	15/12/16	1.72	0.10	5191	6.98	-153.2	45.8	18.4
GW3	15/03/17	0.95	0.86	2563	7.50	-83.8	115.2	21.4
GW3	15/06/17	1.07	1.78	3613	6.80	-37.1	161.9	14.1
GW3	15/09/17	1.77	-	6050	7.14	-120.3	78.7	17.9
GW3	15/12/17	1.78	1.70	6193	7.31	45.2	244.2	19.3
GW3	15/03/18	1.76	0.66	7124	7.12	-33.3	165.7	23.1
GW3	15/06/18	1.03	0.55	6605	7.22	-35.0	164.0	20.1
GW3	13/09/18	1.06	0.65	6078	7.34	-39.0	160.0	22.0
GW3	13/12/18	1.60	1.74	6898	7.05	-97.5	101.5	20.9
GW3	14/04/19	1.59	0.77	6850	7.16	102.1	301.1	20.3
GW3	13/06/19	1.67	0.48	6095	7.02	-47.8	151.2	18.6
GW3	17/09/19	1.64	0.98	6720	7.07	-31.1	167.9	17.9
GW3	16/12/19	2.01	0.32	6446	7.11	-74.9	124.1	20.2
GW3	16/03/20	1.34	0.29	4802	6.76	-53.5	145.5	20.6
GW3	16/06/20	1.60	0.19	4737	7.05	-429.7	-230.7	18.0
GW3	15/09/20	1.42	0.08	3951	7.18	31.9	230.9	17.6
GW3	17/12/20	1.54	0.18	4870	7.44	-87.9	111.1	22.8
GW3	11/03/21	-	0.25	5019	7.36	-129.2	69.8	19.8
GW3	11/06/21	-	-	-	-	-	-	-
GW3	14/09/21	1.63	0.10	4011	7.18	22.2	221.2	16.7
GW3	15/12/21	1.45	0.34	4000	7.12	-45.0	154.0	17.1
GW3	28/03/22	1.34	0.67	4234	7.01	-34.0	165.0	18.9
GW3	15/06/22	1.30	0.56	4321	7.00	-30.0	169.0	17.1
GW3	14/09/22	-	3.49	3989	7.25	-7.3	191.7	16.6
GW3	12/12/22	1.56	2.78	3490	7.12	-15.0	184.0	18.9
GW3	20/03/23	1.34	0.91	789	6.78	-132.0	67.0	18.1
GW3	09/06/23	1.73	8.98	20	8.47	77.0	276.0	17.6
GW3	29/09/23	1.35	4.32	349	7.67	-12.0	187.0	19.1
GW3	15/12/23	1.86	9.53	2	5.62	33.5	232.5	23.9
GW3	21/03/24	1.88	3.38	2957	7.19	-116.2	82.8	19.6
GW3	24/06/24	2.06	0.90	2149	7.10	135.8	334.8	16.9
GW4	16/09/11	3.64	2.55	9240	7.02	52.0	251.0	20.6
GW4	15/12/11	3.70	0.82	6957	6.49	-131.0	68.0	20.9
GW4	22/03/12	2.37	2.01	9630	6.89	-63.0	136.0	20.1
GW4	22/06/12	3.23	0.44	18150	6.52	-101.0	98.0	18.3
GW4	18/09/12	3.49	-	6680	6.78	32.0	231.0	19.8
GW4	20/12/12	3.64	0.45	12890	6.66	16.0	215.0	23.9
GW4	20/03/13	3.62	0.63	10010	6.69	-263.0	-64.0	23.7
GW4	17/06/13	3.55	0.23	10776	6.61	-75.0	124.0	19.8
GW4	18/09/13	3.59	0.65	9330	6.68	-16.7	182.3	19.9
GW4	16/12/13	4.42	0.71	15860	6.48	-1.0	198.0	21.6
GW4	14/03/14	4.76	1.13	13882	6.41	-39.9	159.1	22.4
GW4	16/06/14	3.95	1.47	19185	6.37	-79.0	120.0	20.6
GW4	26/09/14	3.74	0.62	19244	6.42	-49.8	149.2	21.6
GW4	16/12/14	3.67	0.43	18302	6.57	0.9	199.9	23.5
GW4	16/03/15	2.76	0.24	16962	6.54	-213.0	-14.0	23.1
GW4	15/06/15	2.60	1.19	9584	6.77	-159.4	39.6	20.1
GW4	14/10/15	2.81	1.04	17945	6.47	40.4	239.4	20.3

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
Field parameters
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample Location	Sample Date	SWL before sampling	Disolved Oxygen	Conductivity	pH	Redox potential (ORP)	Eh	Temperature
		m BTOC	mg/L	µs/cm	pH Units	mV	mV	°C
GW4	11/12/15	2.78	0.59	14577	6.74	-56.3	142.7	28.0
GW4	29/03/16	2.61	1.20	14171	6.68	-148.0	51.0	21.8
GW4	16/06/16	2.86	0.30	23767	6.37	-135.3	63.7	20.7
GW4	15/09/16	2.50	0.30	13690	6.70	-29.1	169.9	20.3
GW4	15/12/16	2.76	0.21	10263	6.64	-132.7	66.3	19.6
GW4	15/03/17	2.60	0.53	21075	6.86	-103.6	95.4	22.7
GW4	15/06/17	2.50	0.02	16803	5.96	-91.4	107.6	18.4
GW4	15/09/17	2.69	-	21559	6.58	-119.0	80.0	20.4
GW4	15/12/17	2.89	1.54	13288	7.06	43.1	242.1	20.3
GW4	15/03/18	2.90	0.69	17476	6.54	-99.6	99.4	24.7
GW4	15/06/18	2.11	0.99	15655	6.67	-54.0	145.0	20.2
GW4	13/09/18	2.03	0.77	16455	6.55	-34.0	165.0	19.9
GW4	13/12/18	3.09	0.44	22708	6.39	-70.8	128.2	21.1
GW4	14/03/19	3.55	0.26	21190	6.47	-79.4	119.6	21.0
GW4	13/06/19	2.90	3.21	23821	-	0.0	199.0	-
GW4	17/09/19	3.10	1.53	20348	6.87	-46.9	152.1	20.7
GW4	16/12/19	3.20	0.45	18109	6.43	22.0	221.0	22.0
GW4	16/03/20	-	0.53	19351	6.34	-107.8	91.2	20.8
GW4	16/06/20	2.84	0.44	23504	6.28	-145.5	53.5	18.9
GW4	15/09/20	2.83	0.19	16677	6.69	-168.4	30.6	22.9
GW4	17/12/20	3.72*	2.01	19080	6.68	-124.9	74.1	24.8
GW4	11/03/21	-	0.16	17528	6.71	-127.4	71.6	22.4
GW4	11/06/21	3.2*	0.50	13104	6.41	-152.3	46.7	20.5
GW4	14/09/21	3.35	2.78	9483	6.65	-126.9	72.1	17.9
GW4	15/12/21	3.10	1.76	8456	6.67	-120.0	79.0	18.9
GW4	28/03/22	2.90	0.45	5672	6.98	-12.0	187.0	20.1
GW4	15/06/22	2.96	0.55	5876	6.99	-23.0	176.0	17.0
GW4	14/09/22	2.95	3.80	8621	6.69	68.9	267.9	19.5
GW4	12/12/22	2.90	1.45	3420	6.45	-23.0	267.9	19.7
GW4	20/03/23	3.00	0.24	560	6.70	-2.0	197.0	18.7
GW4	09/06/23	3.01	0.16	5973	6.47	-80.4	118.6	19.6
GW4	29/09/23	2.45	0.56	4560	6.78	-27.0	172.0	19.2
GW4	15/12/23	3.30	9.05	84	6.08	-146.1	52.9	23.0
GW4	21/03/24	3.49	1.85	5217	7.24	-132.9	66.1	21.1
GW4	24/06/24	4.30	3.73	10239	6.77	-71.5	127.5	19.9

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Sample Location	Sample Date	SWL before sampling	Disolved Oxygen	Conductivity	pH	Redox potential (ORP)	Eh	Temperature
		m BTOC	mg/L	µs/cm	pH Units	mV	mV	°C
Surface Water								
SW1	16/09/11	-	3.37	1767	7.53	15.0	214.0	16.7
SW1	15/12/11	-	4.56	1384	8.59	12.0	211.0	21.6
SW1	22/03/12	-	4.91	1160	8.14	25.0	224.0	19.1
SW1	22/06/12	-	5.62	526	6.27	270.0	469.0	18.9
SW1	18/09/12	-	1.08	841	7.74	-36.0	163.0	12.9
SW1	20/12/12	-	3.62	501	6.90	-42.0	157.0	21.2
SW1	20/03/13	-	4.19	1889	8.07	-313.0	-114.0	24.7
SW1	17/06/13	-	6.10	1069	8.17	-79.3	119.7	12.3
SW1	18/09/13	-	6.51	605	8.50	23.0	222.0	16.7
SW1	16/12/13	-	1.82	554	7.05	143.0	342.0	21.6
SW1	14/03/14	-	4.36	720	7.35	2.4	201.4	20.9
SW1	16/06/14	-	10.53	674	8.19	-46.0	153.0	12.5
SW1	26/09/14	-	6.31	688	8.16	-66.9	132.1	18.6
SW1	16/12/14	-	Water quality meter faulty. No parameters measured.					
SW1	16/03/15	-	2.96		7.99	-92.0	107.0	20.2
SW1	15/06/15	-	2.11	622	9.21	-46.0	153.0	10.9
SW1	14/10/15	-	0.88	382	7.37	148.3	347.3	19.1
SW1	11/12/15	-	0.55	949	7.94	-142.0	57.0	25.2
SW1	29/03/16	-	2.14	1421	7.69	-127.4	71.6	21.3
SW1	15/06/16	-	5.53	608	7.28	-56.4	142.6	12.3
SW1	15/09/16	-	4.30	1016	7.87	-43.1	155.9	16.2
SW1	15/12/16	-	6.43	124	7.91	-58.9	140.1	20.7
SW1	15/03/17	-	8.23	242	9.00	-24.4	174.6	22.9
SW1	15/06/17	-	5.06	976	6.99	-54.4	144.6	12.2
SW1	15/09/17	-	-	644	7.63	-113.4	85.6	14.7
SW1	15/12/17	-	-	1768	7.55	-131.2	67.8	25.2
SW1	15/03/18	-	0.84	705	7.97	-115.0	84.0	24.1
SW1	15/06/18	-	0.67	777	7.70	-99.0	100.0	19.1
SW1	13/09/18	-	0.44	690	7.60	-103.0	96.0	20.5
SW1	13/12/18	-	4.32	1275	7.66	-143.1	55.9	23.9
SW1	14/03/19	-	7.00	950	7.61	-164.5	34.5	22.1
SW1	13/06/19	-	0.25	944	7.04	30.5	229.5	14.4
SW1	17/09/19	-	0.98	1057	7.40	-137.0	62.0	12.1
SW1	16/12/19	-	0.49	2466	7.73	-64.9	134.1	22.9
SW1	20/03/20	-	0.67	1180	7.41	-100.0	99.0	20.7
SW1	16/06/20	-	5.91	599	7.92	-366.8	-167.8	12.4
SW1	15/09/20	-	4.81	968	8.40	42.6	241.6	18.2
SW1	17/12/20	-	1.90	426	7.23	-4.7	194.3	24.8
SW1	11/03/21	-	4.56	692	7.70	35.4	234.4	22.9
SW1	11/06/21	-	8.08	538	7.72	17.0	216.0	11.1
SW1	14/09/21	-	9.80	288	7.72	41.0	240.0	13.8
SW1	15/12/21	-	3.45	345	7.75	34.0	233.0	18.5
SW1	28/03/22	-	2.11	123	7.01	12.0	211.0	19.1
SW1	15/06/22	-	2.34	321	7.11	14.0	213.0	17.2
SW1	14/09/22	-	2.40	1420	7.82	-55.7	143.3	15.8
SW1	12/12/22	-	2.34	1230	7.50	-22.0	177.0	19.0
SW1	14/03/23	-	3.67	1239	7.22	129.0	328.0	19.9
SW1	09/06/23	-	3.52	411	6.63	-95.2	103.8	13.7
SW1	29/09/23	-	3.45	1021	7.14	-34.0	165.0	19.1
SW1	15/12/23	-	5.08	790	7.68	-34.0	165.0	26.6
SW1	21/03/24	-	3.21	929	7.54	-14.5	184.5	22.7
SW1	24/06/24	-	8.29	586	7.31	32.7	231.7	11.9
SW2	16/09/11	-	2.01	456	8.31	42.0	241.0	14.1
SW2	15/12/2011	-	1.41	353	7.01	-69.0	130.0	19.2
SW2	22/03/12	-	5.09	470	7.47	-64.0	135.0	18.4
SW2	22/06/12	-	3.61	526	6.72	106.0	305.0	19.1
SW2	18/09/12	-	2.62	541	8.07	227.0	426.0	17.4
SW2	20/12/12	-	2.56	639	6.76	25.0	224.0	20.9
SW2	20/03/13	-	1.84	521	7.45	-379.0	-180.0	20.2
SW2	17/06/13	-	0.46	383	7.04	-45.7	153.3	11.5

TABLE 1
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Field parameters

Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample Location	Sample Date	SWL before sampling	Disolved Oxygen	Conductivity	pH	Redox potential (ORP)	Eh	Temperature
		m BTOC	mg/L	µs/cm	pH Units	mV	mV	^{o}C
SW2	18/09/13	-	1.47	572	7.74	-105.7	93.3	15.4
SW2	16/12/13	-	1.40	429	7.36	-95.0	104.0	23.2
SW2	14/03/14	-	0.54	244	6.56	-126.5	72.5	20.9
SW2	16/06/14	-	2.17	304	6.85	-31.0	168.0	12.6
SW2	26/09/14	-	0.49	310	7.03	-160.3	38.7	18.0
SW2	16/12/14	-	1.11	247	7.27	-84.0	115.0	21.4
SW2	16/03/15	-	4.41	323	8.29	-57.0	142.0	20.0
SW2	15/06/15	-	2.01	725	9.94	-42.0	157.0	10.1
SW2	14/10/15	-	0.50	537	7.17	-53.0	146.0	18.0
SW2	11/12/15	-	1.84	534	7.62	-38.0	161.0	27.7
SW2	29/03/16	-	0.01	538	6.42	-162.4	36.6	19.8
SW2	15/06/16	-	0.01	981	6.88	29.1	228.1	10.8
SW2	15/09/16	-	1.43	651	7.55	-148.4	50.6	15.8
SW2	15/12/16	-	1.66	240	7.72	-71.0	128.0	20.6
SW2	15/03/17	-	3.60	426	8.13	-23.3	175.7	22.0
SW2	15/06/17	-	1.60	593	6.70	-14.7	184.3	10.7
SW2	15/09/17	-	-	802	7.64	-112.7	86.3	15.7
SW2	15/12/17	-	-	436	7.63	7.4	206.4	21.7
SW2	15/03/18	-	8.60	345	8.90	-100.3	98.7	21.4
SW2	15/06/18	-	1.33	354	8.30	-45.0	154.0	17.6
SW2	13/09/18	-	8.60	345	8.90	-100.3	98.7	20.1
SW2	13/12/18	-	3.05	333	7.21	-51.5	147.5	24.8
SW2	14/03/19	-	1.08	330	8.30	-148.7	50.3	22.0
SW2	13/06/19	-	0.59	325	7.19	-197.0	2.0	12.3
SW2	17/09/19	-	1.20	357	7.43	-88.0	111.0	11.1
SW2	16/12/19	-	3.27	541	7.32	67.2	266.2	26.1
SW2	20/03/20	-	1.03	395	7.30	-45.0	154.0	20.8
SW2	16/06/20	-	0.35	307	7.89	-436.0	-237.0	11.1
SW2	15/09/20	-	0.69	422	7.17	-179.2	19.8	17.1
SW2	17/12/20	-	0.18	244	7.06	-168.1	30.9	22.8
SW2	11/03/21	-	2.07	413	6.92	-168.9	30.1	21.6
SW2	11/06/21	-	2.69	181	6.84	-94.0	105.0	11.9
SW2	14/09/21	-	2.03	228	7.26	48.9	247.9	13.5
SW2	15/12/21	-	1.87	213	7.45	34.0	233.0	18.1
SW2	28/03/22	-	1.34	167	7.12	23.0	222.0	18.7
SW2	15/06/22	-	1.12	204	7.02	34.0	233.0	17.8
SW2	14/09/22	-	1.63	613	6.53	-107.0	92.0	16.0
SW2	12/12/22	-	1.78	879	7.03	-100.0	99.0	19.0
SW2	14/03/23	-	5.60	989	7.01	233.0	432.0	19.9
SW2	09/06/23	-	1.52	539	4.82	-85.5	113.5	12.7
SW2	29/09/23	-	1.78	673	7.01	-69.0	130.0	19.5
SW2	15/12/23	-	0.48	2	5.62	-74.2	124.8	24.8
SW2	21/03/24	-	0.34	385	6.11	-81.8	117.2	19.3
SW2	24/06/24	-	0.13	269	6.64	-178.9	20.1	10.0

Notes:
ORP - oxidation reduction potential as measured with a platinum electrode and silver-chloride reference electrode.
Eh - redox potential relative to the standard hydrogen electrode (calculated as Eh = ORP + 199 mV)
SWL: Standing Water Level
m BTOC: metres Below Top of Casing

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

					Sample ID	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1
					Sample Date	16/09/2011	13/01/2012	22/03/2012	22/06/2012	18/09/2012	20/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014	16/03/2015	15/06/2015	14/10/2015
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																		
pH																						
pH Value	pH Unit	0.01	-	6.5 - 8.0		7.3	7.39	7.35	7.54	7.51	7.31	7.38	7.46	7.51	7.39	7.11	7.84	7.05	6.86	7.47	7.21	7.36
Electrical Conductivity																						
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200		**2420**	2060	1840	1800	**2240**	**2240**	2030	2020	**2240**	1860	2040	1840	1800	1760	1830	1620	1820
Alkalinity																						
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-		1040	1060	961	932	1250	1160	1000	965	1250	826	999	830	824	764	952	911	838
Total Alkalinity as CaCO3	mg/L	1	-	-		1040	1060	961	932	1250	1160	1000	965	1250	826	999	830	824	764	952	911	838
Sulfate																						
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-		49	<10	14	20	<1	<1	7	<10	<10	35	<10	35	197	83	37	49	30
Cations and Anions																						
Chloride	mg/L	1	-	-		162	104	66	70	106	108	86	89	106	85	103	85	74	50	73	59	70
Calcium	mg/L	1	-	-		135	172	195	179	219	209	200	176	219	188	168	183	183	211	193	168	169
Magnesium	mg/L	1	-	-		92	85	90	81	100	101	85	79	100	76	79	73	88	82	101	70	80
Sodium	mg/L	1	-	-		223	199	120	120	170	175	151	140	170	128	129	118	124	94	122	92	99
Potassium	mg/L	1	-	-		12	12	10	10	12	13	13	12	12	14	14	13	12	9	8	6	6
Total Anions	meq/L	0.01	-	-		-	24.1	21.4	-	28	26.2	22.6	21.8	28	19.6	22.9	19.7	22.6	18.4	21.8	20.9	19.3
Total Cations	meq/L	0.01	-	-		-	24.5	22.6	-	26.9	26.7	23.9	21.7	26	21.6	20.8	20.6	22.1	21.6	23.4	18.3	19.5
Ionic Balance	%	0.01	-	-		-	0.87	2.86	-	2.02	0.86	2.85	0.26	2	4.69	4.61	2.22	1.3	7.98	3.53	6.6	0.34
Total Metals																						
Manganese	mg/L	0.001	1.9	-		1.01	1.4	1.85	**2.57**	**2.45**	**2.16**	1.9	**1.96**	**2.45**	1.5	1.45	1.09	0.646	0.802	0.709	0.88	0.53
Iron	mg/L	0.05	-	-		4.66	3.75	3	7.17	17.3	20.1	7.15	16.4	17.3	10	13.2	2.88	1.74	4.22	7.05	2.46	2.94
Dissolved Metals																						
Manganese	mg/L	0.001	1.9	-		0.962	1.21	**2.4**	**2.51**	**2.56**	**2.28**	**2.26**	**2.05**	**2.56**	1.31	1.45	1.06	0.584	0.806	0.653	0.688	0.574
Iron	mg/L	0.05	-	-		4.81	3.75	3.58	7.44	0.93	<0.05	0.33	0.05	0.93	0.17	<0.05	1.7	0.12	2.65	1.69	0.72	<0.05
Fluoride																						
Fluoride	mg/L	0.1	-	-		0.3	0.2	0.4	0.3	0.4	0.4	0.4	0.5	0.4	0.3	0.4	0.4	0.4	0.3	0.5	0.4	0.3
Nitrate, Nitrite & Ammonia																						
Ammonia as N	mg/L	0.01	0.9	-		**3.48**	**3.37**	**2.14**	**2.17**	**3.73**	**4.63**	**2.67**	**4.01**	**3.73**	**3.85**	**4.64**	**3.81**	**1.26**	**1.2**	**1.85**	**1.44**	**2.45**
Nitrite as N	mg/L	0.01	-	-		<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01	<0.10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-		<0.01	0.01	**2.45**	0.01	<0.01	<0.1	<0.1	<0.01	<0.01	0.01	<0.10	<0.01	0.02	<0.01	0.17	0.03	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04		<0.01	0.01	**2.45**	0.01	<0.01	<0.1	<0.1	<0.01	<0.01	0.01	<0.10	<0.01	0.02	<0.01	**0.17**	0.03	<0.01
Total Organic Carbon																						
Total Organic Carbon	mg/L	1	-	-		24	24	19	19	25	25	21	27	25	24	21	21	18	12	25	13	9
Monocyclic Aromatic Hydrocarbons																						
Benzene	µg/L	1	950	-		-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-		-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-		-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-		-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene																-	-	-	-	-		
Naphthalene	µg/L	7	16	-		-	-	<7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds																-	-	-	-	-		
Vinyl Acetate	µg/L	50	-	-		-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-		-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-		-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-		-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																						
2.2-Dichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1
				Sample Date	16/09/2011	13/01/2012	22/03/2012	22/06/2012	18/09/2012	20/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014	16/03/2015	15/06/2015	14/10/2015
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																	
Halogenated Aliphatic Compounds																					
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																					
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																					
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1
				Sample Date	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018	13/09/2018	13/12/2018	14/03/2019	13/06/2019	17/09/2019	16/12/2019
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																	
pH																					
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.83	7.24	7.88	7.62	7.43	7.32	7.36	7.48	6.96	7.31	7.65	7.2	7.37	7.38	7.66	7.07	7.71
Electrical Conductivity																					
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	1830	1640	1500	4150	1910	1710	1720	1810	2060	1910	976	2220	2180	2100	2030	2000	1920
Alkalinity																					
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	783	914	551	671	942	788	686	912	1120	988	165	1010	792	980	879	640	830
Total Alkalinity as CaCO3	mg/L	1	-	-	783	914	551	671	942	788	686	912	1120	988	165	1010	792	982	879	640	830
Sulfate																					
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	151	5	157	87	<1	76	114	<10	<10	84	64	<1	206	42	49	278	<1
Cations and Anions																					
Chloride	mg/L	1	-	-	85	64	107	851	86	92	76	79	106	172	191	160	180	143	160	133	174
Calcium	mg/L	1	-	-	212	195	168	21	195	165	169	184	196	205	29	238	254	186	208	213	184
Magnesium	mg/L	1	-	-	99	78	60	55	80	74	69	71	80	79	16	89	106	84	90	85	77
Sodium	mg/L	1	-	-	107	114	90	745	123	99	105	110	116	124	140	146	147	131	138	136	123
Potassium	mg/L	1	-	-	7	8	11	1	10	10	10	8	10	9	7	13	7	7	9	14	10
Total Anions	meq/L	0.01	-	-	21.2	0.01	-	39.2	21.2	19.9	18.2	20.4		26.3	10	24.7	25.2	24.5	23.1	22.3	21.5
Total Cations	meq/L	0.01	-	-	23.6	0.01	-	38	21.9	18.9	18.9	20		22.4	9.03	25.9	28	22.1	24	23.9	21.1
Ionic Balance	%	0.01	-	-	5.31	0.01	-	1.61	1.56	2.67	1.91	1.08		8.18	5.17	2.36	5.23	5.27	1.96	3.4	0.86
Total Metals																					
Manganese	mg/L	0.001	1.9	-	0.322	0.791	0.5	0.396	0.841	0.581	0.683	0.86	1.09	0.893	-	1.05	0.204	0.365	0.344	1.79	0.598
Iron	mg/L	0.05	-	-	4.32	5	3.25	2.00	8.7	6.91	7.52	6.59	11.4	11.8	-	25.6	2.96	1.77	0.86	14.7	4.9
Dissolved Metals																					
Manganese	mg/L	0.001	1.9	-	0.337	0.784	0.495	0.323	0.736	0.522	0.64	0.807	1.07	0.898	0.033	0.933	0.178	0.34	0.34	**1.96**	0.522
Iron	mg/L	0.05	-	-	0.71	3.12	1.99	0.41	3.98	2.92	3.68	3.7	10.1	10.5	0.16	<0.05	1.17	0.15	0.08	6.69	<0.05
Fluoride																					
Fluoride	mg/L	0.1	-	-	0.3	0.3	0.4	0.7	0.3	0.4	0.3	0.3	0.3	0.3	0.6	0.4	0.4	0.3	0.3	0.3	0.5
Nitrate, Nitrite & Ammonia																					
Ammonia as N	mg/L	0.01	0.9	-	**1.25**	**2.46**	0.58	0.07	**2.41**	**0.98**	**1.9**	**2.61**	**5.06**	**4.16**	**6.99**	**6.83**	**1.27**	**11**	**7.32**	**8.35**	**6.88**
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.01	0.03	0.03	<0.01	0.01	<0.01	<0.01	<0.01	0.03
Nitrate as N	mg/L	0.01	2.4	-	<0.01	0.01	0.02	1	0.01	0.02	<0.01	0.02	<0.01	<0.01	-	<0.01	0.01	0.06	<0.01	0.03	0.17
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	<0.01	0.01	0.02	**1**	0.01	0.03	<0.01	0.02	<0.01	<0.01	-	<0.01	0.02	0.06	<0.01	0.03	**0.20**
Total Organic Carbon																					
Total Organic Carbon	mg/L	1	-	-	16	17	10	12	14	13	16	14	20	22	19	22	18	21	19	20	22
Monocyclic Aromatic Hydrocarbons																					
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene							-	-	-	-	-	-	-	-	-						
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds																					
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																					
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1
				Sample Date	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018	13/09/2018	13/12/2018	14/03/2019	13/06/2019	17/09/2019	16/12/2019
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																	
Halogenated Aliphatic Compounds																					
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																					
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																					
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW1	GW1	GW1	GW1	GW1
				Sample Date	16/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**					
pH									
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.64	7.56	7.26	7.64	7.23
Electrical Conductivity									
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	1800	2170	1682	1780	1411
Alkalinity									
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	629	890	815	868	378
Total Alkalinity as CaCO3	mg/L	1	-	-	629	890	815	868	378
Sulfate									
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	80	156	83	68	175
Cations and Anions									
Chloride	mg/L	1	-	-	149	182	123	146	148
Calcium	mg/L	1	-	-	177	216	191	190	102
Magnesium	mg/L	1	-	-	70	92	78	64	37
Sodium	mg/L	1	-	-	130	163	136	132	119
Potassium	mg/L	1	-	-	12	7	9	10	7
Total Anions	meq/L	0.01	-	-	18.4	26.2	21.5	22.9	15.4
Total Cations	meq/L	0.01	-	-	20.6	25.6	22.1	20.7	13.5
Ionic Balance	%	0.01	-	-	5.43	1.05	1.41	4.88	6.52
Total Metals									
Manganese	mg/L	0.001	1.9	-	0.398	0.874	0.369	0.296	0.186
Iron	mg/L	0.05	-	-	0.55	6.51	1.81	1.12	0.32
Dissolved Metals									
Manganese	mg/L	0.001	1.9	-	0.402	0.874	0.348	0.294	0.17
Iron	mg/L	0.05	-	-	0.31	1.27	0.43	0.41	0.29
Fluoride									
Fluoride	mg/L	0.1	-	-	0.3	0.3	0.3	0.3	0.4
Nitrate, Nitrite & Ammonia									
Ammonia as N	mg/L	0.01	0.9	-	**1.01**	**2.33**	**1.87**	**2.74**	0.52
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	<0.01	0.1	<0.01	<0.01	0.09
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	<0.01	**0.10**	<0.01	<0.01	**0.09**
Total Organic Carbon									
Total Organic Carbon	mg/L	1	-	-	42	3	18	28	16
Monocyclic Aromatic Hydrocarbons									
Benzene	µg/L	1	950	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-
Napthalene									
Naphthalene	µg/L	7	16	-	-	-	-	-	-
Volitile Organic Compounds									
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-
Fumigants									
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5

				Sample ID	GW1	GW1	GW1	GW1	GW1
				Sample Date	16/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**					
Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds									
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5
Trihalomethanes									
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1
				Sample Date	11/06/2021	14/09/2021	16/12/2021	28/03/2022	15/06/2022	14/09/2022	12/12/2022	20/03/2023	9/06/2023	14/09/2023	15/12/2023	21/03/2024	24/06/2024
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
pH																	
pH Value	pH Unit	0.01	-	6.5 - 8.0	8.05		7.03	7		6.76	6.65	6.56	6.67				6.95
Electrical Conductivity																	
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	1680		1500	1400	1200	1400	1230	236	1149				1294
Alkalinity																	
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	487	261	480	49	508	509	499	50	932	361	508	355	669
Total Alkalinity as CaCO3	mg/L	1	-	-	487	261	480	43	508	509	499	50	932	361	508	355	669
Sulfate																	
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	112	65	51	9	98	58	45	4	417	64	47	50	37
Cations and Anions																	
Chloride	mg/L	1	-	-	230	138	99	26	66	95	67	16	2340	181	164	189	112
Calcium	mg/L	1	-	-	114	64	110	17	108	117	117	17	13	95	108	105	176
Magnesium	mg/L	1	-	-	42	22	36	5.3	42	37	42	2	168	33	39	28	53
Sodium	mg/L	1	-	-	175	109	106	15	110	108	110	13	1640	126	116	116	115
Potassium	mg/L	1	-	-	11	10	11	2.8	10	13	10	1	13	14	14	12	10
Total Anions	meq/L	0.01	-	-	18.6	10.5	13.4	3.4	14	14	14	1.53	6.4	13.6	15.8	13.5	17.5
Total Cations	meq/L	0.01	-	-	17	10	13.3	3.3	13.9	13.9	13.9	1.6	6.46	13.3	14	12.9	18.4
Ionic Balance	%	0.01	-	-	4.25	2.25	0.38	0.23	0.59	0.51	0.51	-	0.43	1.32	5.89	2.16	3.1
Total Metals																	
Manganese	mg/L	0.001	1.9	-	0.175	0.111	0.208	6	0.351	0.409	0.208	<0.001	2.48	1.2	0.666	1.03	0.688
Iron	mg/L	0.05	-	-	1.14	1.25	1.22	6	1.08	1.18	1.22	<0.05	0.84	4.74	9.15	1.41	0.93
Dissolved Metals																	
Manganese	mg/L	0.001	1.9	-	0.149	0.026	0.226	5	0.38	37	22	<0.001	1.59	0.838	0.409	3.44	0.623
Iron	mg/L	0.05	-	-	0.22	0.18	0.97	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.1	0.06	<0.05
Fluoride																	
Fluoride	mg/L	0.1	-	-	0.3	0.4	0.6	0.91	0.3	0.2	0.2	1.1	<0.1	0.4	0.4	0.4	0.3
Nitrate, Nitrite & Ammonia																	
Ammonia as N	mg/L	0.01	0.9	-	0.83	0.21	0.54	0.38	1.36	1.77	0.65	0.34	0.41	1.3	**1.36**	0.3	**1.18**
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.19	<0.01	0.01	0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.02	0.05	0.06	0.36	<0.01	<0.01	<0.01	0.14	<0.01	<0.01	0.06	0.04	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.03	**0.05**	**0.06**	**0.20**	<0.01	<0.01	<0.01	0.16	<0.01	<0.01	0.07	0.04	<0.01
Total Organic Carbon																	
Total Organic Carbon	mg/L	1	-	-	5	15	12	4.5	12	22	14	2	4	19	29	17	10
Monocyclic Aromatic Hydrocarbons																	
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-		-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-		-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-		-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-		-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-		-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-		-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-		-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-		-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-		-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-		-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-		-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-		-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-		-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-		-	-	-
Napthalene																	
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-		-	-	-
Volitile Organic Compounds																	
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-		-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-		-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-		-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-		-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-		-	-	-
Fumigants																	
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	<5	<5	-
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	<5	<5	-
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-

				Sample ID	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1	GW1
				Sample Date	11/06/2021	14/09/2021	16/12/2021	28/03/2022	15/06/2022	14/09/2022	12/12/2022	20/03/2023	9/06/2023	14/09/2023	15/12/2023	21/03/2024	24/06/2024
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**													
Halogenated Aliphatic Compounds																	
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<5	<50	<50	<50	<50	<50	<50	<50	<50	-
Chloromethane	µg/L	50	-	-	<50	<50	<50	<5	<50	<50	<50	<50	<50	<50	<50	<50	-
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<0.3	<50	<50	<50	<50	<50	<50	<50	<50	-
Bromomethane	µg/L	50	-	-	<50	<50	<50	-	<50	<50	<50	<50	<50	<50	<50	<50	-
Chloroethane	µg/L	50	-	-	<50	<50	<50	<5	<50	<50	<50	<50	<50	<50	<50	<50	-
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<1	<50	<50	<50	<50	<50	<50	<50	<50	-
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<0..5	<5	<5	<5	<5	<5	<5	<5	<5	-
1.1-DC	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<1	<5	<5	<5	<5	<5	<5	<5	<5	-
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<1	<5	<5	<5	<5	<5	<5	<5	<5	-
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	<5	<5	-
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
Halogenated Aromatic Compounds																	
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<0.3	<5	<5	<5	<5	<5	<5	<5	<5	-
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
Trihalomethanes																	
Chloroform	µg/L	5	770	-	<5	<5	<5	75	<5	<5	<5	26	<5	<5	<5	<5	-
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	17	<5	<5	<5	6	<5	<5	<5	<5	-
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-
Bromoform	µg/L	5	-	-	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	-

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3
				Sample Date	16/09/2011	15/12/2011	22/03/2012	22/06/2012	18/09/2012	20/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014	16/03/2015	15/06/2015	14/10/2015
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																	
pH																					
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.58	7.6	7.42	7.73	7.76	7.67	7.59	7.69	7.76	7.63	7.12	**8.05**	7.12	7.75	7.63	7.25	7.56
Electrical Conductivity																					
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**7670**	**4540**	**3180**	**3890**	**6770**	**7470**	**4180**	**7160**	**6700**	**7630**	**7880**	**8170**	**7940**	**3980**	**5960**	**4160**	**6800**
Alkalinity																					
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	1240	791	548	705	1300	1340	683	1150	1300	1240	1370	1320	1510	579	1010	743	1010
Total Alkalinity as CaCO3	mg/L	1	-	-	1240	791	548	705	1900	1340	683	1150	1900	1240	1370	1320	1510	579	1010	743	1010
Sulfate																					
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	170	`	81	134	166	186	88	144	166	170	172	163	187	82	115	92	132
Cations and Anions																					
Chloride	mg/L	1	-	-	1520	913	671	856	1360	1730	822	1380	1360	1610	1620	1580	1910	910	1230	814	1430
Calcium	mg/L	1	-	-	27	21	19	22	37	35	20	38	37	41	37	47	44	20	30	25	37
Magnesium	mg/L	1	-	-	126	80	50	62	136	158	65	128	136	146	155	159	162	60	111	57	105
Sodium	mg/L	1	-	-	1510	938	587	795	1380	1530	820	1330	1380	1420	1500	1490	1490	704	1260	746	1140
Potassium	mg/L	1	-	-	1	2	4	3	2	1	2	2	2	1	2	2	2	1	1	2	1
Total Anions	meq/L	0.01	-	-	-	43.9	31.6	-	79.8	79.4	38.7	64.9	79.8	73.7	76.6	74.3	87.9	39	57.3	39.7	63.3
Total Cations	meq/L	0.01	-	-	-	48.5	30.7	-	73.1	81.3	42.1	70.3	73.1	75.8	79.9	80.3	80.4	36.6	65.5	38.4	60.1
Ionic Balance	%	0.01	-	-	-	4.89	1.42	-	4.4	1.14	4.18	3.98	4.4	1.39	2.04	3.82	4.52	3.16	6.64	1.68	2.6
Total Metals																					
Manganese	mg/L	0.001	1.9	-	0.236	0.211	0.512	0.429	0.884	0.729	0.238	0.818	0.884	0.615	0.472	0.84	0.501	0.337	0.628	0.922	1.12
Iron	mg/L	0.05	-	-	<0.05	1.25	2.14	1.37	7.95	6.72	2.74	6.79	7.95	6.12	3.71	3.99	3.07	4.89	6.21	3.99	10.2
Dissolved Metals																					
Manganese	mg/L	0.001	1.9	-	0.248	0.253	0.424	**2.54**	0.885	0.693	0.306	0.863	0.855	0.532	0.545	0.812	0.439	0.274	0.506	0.677	0.918
Iron	mg/L	0.05	-	-	0.49	2.72	4.9	7.42	<0.05	<0.05	1.11	<0.05	<0.05	<0.05	<0.05	1.56	2.53	1.6	3.08	1.31	<0.05
Fluoride																					
Fluoride	mg/L	0.1	-	-	0.8	0.8	0.8	0.7	0.8	1	0.7	1.1	0.8	0.8	1	1.1	1	0.7	0.8	0.7	0.9
Nitrate, Nitrite & Ammonia																					
Ammonia as N	mg/L	0.01	0.9	-	0.03	0.04	0.14	0.11	0.2	<0.1	0.09	0.25	0.2	0.19	0.17	0.6	0.23	0.14	0.26	0.48	0.69
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.02	<0.01	0.15	<0.01	**12.8**	0.02	<0.01	<0.01	**12.8**	0.04	0.09	0.01	0.02	0.02	<0.01	0.01	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.02	<0.01	**0.15**	<0.01	**12.8**	0.02	<0.01	<0.01	**12.8**	**0.04**	**0.09**	0.01	0.02	0.02	<0.01	0.01	0.01
Total Organic Carbon																					
Total Organic Carbon	mg/L	1	-	-	19	24	17	19	16	23	17	24	16	35	20	25	18	18	30	17	15
Monocyclic Aromatic Hydrocarbons																					
Benzene	µg/L	1	950	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene																					
Naphthalene	µg/L	7	16	-	-	-	<7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds																					
Vinyl Acetate	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																					
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3
				Sample Date	16/09/2011	15/12/2011	22/03/2012	22/06/2012	18/09/2012	20/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014	16/03/2015	15/06/2015	14/10/2015
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																	
Halogenated Aliphatic Compounds																					
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																					
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																					
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3
				Sample Date	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018	13/09/2018	13/12/2018	14/03/2019	13/06/2019	17/09/2019	16/12/2019
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																	
pH																					
pH Value	pH Unit	0.01	-	6.5 - 8.0	**8.63**	7.6	7.57	7.63	7.66	7.08	7.56	7.75	7.39	7.71	7.79	7.86	7.46	7.53	7.96	7.88	**8.06**
Electrical Conductivity																					
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**7130**	**6110**	**3290**	**1610**	**6720**	**2460**	**6300**	**7050**	**7460**	**7320**	**6240**	**7130**	**7180**	**7380**	**6320**	**6360**	**5330**
Alkalinity																					
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	109	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	1040	1110	343	748	1030	297	809	1120	1360	1650	1550	1380	1220	1440	1040	1420	1190
Total Alkalinity as CaCO3	mg/L	1	-	-	1150	1110	343	748	1030	297	809	1120	1360	1650	1550	1380	1220	1440	1040	1420	1190
Sulfate																					
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	168	133	86	94	96	50	95	104	194	234	170	179	172	206	129	118	156
Cations and Anions																					
Chloride	mg/L	1	-	-	1620	1330	798	66	1460	592	1270	1370	1640	1740	1390	1500	1440	1370	1240	1150	1090
Calcium	mg/L	1	-	-	40	28	31	164	46	20	35	41	36	44	36	39	43	33	32	37	22
Magnesium	mg/L	1	-	-	127	101	57	71	116	55	98	133	133	149	132	144	130	123	104	119	84
Sodium	mg/L	1	-	-	1260	1210	541	100	1320	656	1060	1310	1320	1520	1450	1530	1380	1420	1240	1360	1120
Potassium	mg/L	1	-	-	1	<1	3	5	2	2	2	1	1	1	1	1	1	1	1	1	<1
Total Anions	meq/L	0.01	-	-	72.2	20.2	-	18.8	63.8	23.7	54	63.2	77.5	86.9	73.7	73.6	68.6	71.1	58.4	63.3	57.8
Total Cations	meq/L	0.01	-	-	67.3	21.3	-	18.5	69.3	34.1	56	70	70.2	80.6	75.8	80.4	72.9	13.6	67.1	70.8	56.7
Ionic Balance	%	0.01	-	-	3.54	2.75	-	0.7	4.17	1.8	1.82	5.11	4.94	3.77	1.36	4.39	3.05	1.28	4.63	5.63	0.91
Total Metals																					
Manganese	mg/L	0.001	1.9	-	1.08	0.391	0.5	0.406	0.761	0.421	0.782	0.989	0.812	0.735	0.317	0.321	1.70	0.96	0.64	0.74	0.389
Iron	mg/L	0.05	-	-	9.19	5.15	9.34	2.34	12.1	13.2	0.34	14.4	6.22	3.52	<0.05	1.99	1.75	6.42	4.38	23.4	2.34
Dissolved Metals																					
Manganese	mg/L	0.001	1.9	-	0.965	0.437	0.432	0.158	0.823	0.374	0.782	0.864	0.757	0.586	-	0.061	1.84	0.99	0.57	0.582	0.275
Iron	mg/L	0.05	-	-	7.2	3.66	0.7	<0.05	8.87	1.72	0.34	1.37	2.31	0.44	-	<0.05	1.25	<0.05	0.06	0.11	0.08
Fluoride																					
Fluoride	mg/L	0.1	-	-	0.8	0.8	0.4	0.4	0.8	0.5	0.7	0.8	0.8	0.9	0.8	1	1	1	1	1	1
Nitrate, Nitrite & Ammonia																					
Ammonia as N	mg/L	0.01	0.9	-	0.74	0.25	0.16	0.14	1.15	0.14	0.54	0.79	0.44	0.21	0.22	0.08	0.34	0.63	**0.91**	0.7	0.36
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	0.07	3.03	<0.01	<0.01	<0.01	0.02	0.32	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.04	<0.01	<0.01	<0.01	**5.78**	0.01	0.06	<0.01	<0.01	0.04	-	0.32	0.02	<0.01	<0.01	0.08	0.19
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	**0.04**	<0.01	<0.01	<0.01	**5.78**	**3.04**	**0.06**	<0.01	<0.01	**0.06**	-	0.32	0.02	<0.01	<0.01	**0.08**	**0.19**
Total Organic Carbon																					
Total Organic Carbon	mg/L	1	-	-	24	23	17	25	23	43	26	24	23	33	29	21	23	31	23	27	26
Monocyclic Aromatic Hydrocarbons																					
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene																					
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds																					
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																					
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Analyte	Units	LOR	ANZG 2018 Freshwater 95% protection	ANZECC 2000 Default Trigger Values	Sample ID	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3
					Sample Date	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018	13/09/2018	13/12/2018	14/03/2019	13/06/2019	17/09/2019	16/12/2019
Halogenated Aliphatic Compounds																					
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																					
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																					
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3
				Sample Date	16/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021	28/03/2022	15/06/2022	14/09/2022	12/12/2022	20/03/2023	9/06/2023	14/09/2023	15/12/2023
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																
pH																				
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.44	7.47	7.18	7.81	7.36	-		7.33	7.2		7.25	7.22	6.78	8.47		
Electrical Conductivity																				
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**4800**	**5410**	**3951**	**5270**	**5019**	**-**		**5030**	**5000**		**3989**	**5454**	789	20		
Alkalinity																				
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	383	1040	979	1300	1340	-	713	478	41	1050	899	948	45	1140	1160	653
Total Alkalinity as CaCO3	mg/L	1	-	-	383	1040	979	1300	1340	-	713	478	41	1050	899	948	45	1140	1160	653
Sulfate																				
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	328	209	150	143	130	-	221	333	9	148	114	<10	8	167	159	184
Cations and Anions																				
Chloride	mg/L	1	-	-	1190	1190	933	944	991	-	984	1550	26	1120	999	700	26	1300	1440	801
Calcium	mg/L	1	-	-	48	32	26	28	23	-	34	46	17	27	26	93	17	28	30	21
Magnesium	mg/L	1	-	-	97	92	75	78	74	-	85	119	5.3	86	70	114	3	90	106	55
Sodium	mg/L	1	-	-	826	1120	959	1060	1010	-	826	1080	15	1100	938	508	9	1180	1280	714
Potassium	mg/L	1	-	-	4	1	1	1	1	-	4	4	2.8	2	2	10	1	1	2	3
Total Anions	meq/L	0.01	-	-	48	58.7	49	55.6	57.4	-	46.6	60.2	23	55.6	48.5	38.7	1.8	62.9	67.1	39.5
Total Cations	meq/L	0.01	-	-	46.4	57.9	49.2	53.9	51.2	-	44.7	59.2	26	56.3	47.9	36.4	1.51	60.2	65.9	36.7
Ionic Balance	%	0.01	-	-	1.74	0.68	0.21	1.49	5.74	-	2.06	0.87	0.3	0.6	0.63	3.08	-	2.25	0.87	3.63
Total Metals																				
Manganese	mg/L	0.001	1.9	-	0.349	0.476	0.358	0.466	0.542	-	0.420	0.499	5	0.54	0.486	0.133	0.001	0.501	0.447	0.6
Iron	mg/L	0.05	-	-	3.19	1.85	2.31	1.12	3.74	-	15.9	5.11	7	2.38	13.5	11.7	<0.05	13.8	2.13	81
Dissolved Metals																				
Manganese	mg/L	0.001	1.9	-	0.32	0.455	0.332	0.462	0.529	-	0.337	0.512	5	0.52	0.176	0.118	<0.001	0.335	0.28	0.165
Iron	mg/L	0.05	-	-	0.1	0.13	0.08	2.09	3.74	-	0.1	1.99	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06
Fluoride																				
Fluoride	mg/L	0.1	-	-	0.6	0.8	0.8	0.9	1	-	0.9	0.7	0.91	1	0.7	0.6	0.9	0.8	0.9	0.6
Nitrate, Nitrite & Ammonia																				
Ammonia as N	mg/L	0.01	0.9	-	0.13	0.33	0.14	0.58	0.76	-	0.16	0.89	0.37	0.49	0.23	6.63	0.29	0.35	0.76	0.16
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01		<0.01	**<0.01**	**<0.01**	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.51	0.04	0.08	0.04	<0.01	-	0.08	0.02	0.36	0.05	0.06	0.01	0.13	0.05	0.18	<0.02
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	**0.51**	**0.04**	**0.08**	**0.04**	<0.01	**-**	**0.08**	0.02	**0.36**	**0.05**	**0.06**	**0.01**	0.13	0.22	0.18	<0.03
Total Organic Carbon																				
Total Organic Carbon	mg/L	1	-	-	28	5	22	21	12	-	15	19	4.6	15	24	124	2	23	50	24
Monocyclic Aromatic Hydrocarbons																				
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene																				
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds																				
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																				
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3	GW3
				Sample Date	16/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021	28/03/2022	15/06/2022	14/09/2022	12/12/2022	20/03/2023	9/06/2023	14/09/2023	15/12/2023
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																
Halogenated Aliphatic Compounds																				
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<5	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<5	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<0.3	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<5	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<1	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<0..5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																				
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.3	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																				
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	75	<5	<5	<5	27	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	18	<5	<5	<5	6	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW3	GW3	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4
				Sample Date	21/03/2024	24/06/2024	16/09/2011	15/12/2011	22/06/2012	22/03/2012	18/09/2012	20/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																
pH																				
pH Value	pH Unit	0.01	-	6.5 - 8.0		7.1	7.37	7.2	7.39	7.18	7.61	7.14	7.20	7.33	7.61	7.27	7	7.68	**6.42**	7.40
Electrical Conductivity																				
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200		2149	**9700**	**7060**	**9470**	**17300**	**6880**	**12600**	**7700**	**8260**	**6880**	**11800**	**15100**	**18500**	**19700**	**16500**
Alkalinity																				
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	698	364	860	867	891	711	977	705	944	908	977	790	656	648	711	595
Total Alkalinity as CaCO3	mg/L	1	-	-	698	364	860	867	891	711	977	705	944	908	977	790	656	648	711	595
Sulfate																				
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	157	408	405	311	473	894	319	708	372	424	977	584	829	939	1020	889
Cations and Anions																				
Chloride	mg/L	1	-	-	812	409	2130	1580	2680	5860	1420	3740	1460	1800	1420	3120	4280	5440	5930	5140
Calcium	mg/L	1	-	-	21	47	14	9	17	52	11	22	11	11	11	22	29	58	62	56
Magnesium	mg/L	1	-	-	43	59	184	122	210	584	135	363	150	155	135	279	420	604	726	548
Sodium	mg/L	1	-	-	689	442	1860	1380	1820	3000	1330	2360	1410	1540	1330	2100	2710	3330	3640	3010
Potassium	mg/L	1	-	-	3	6	16	13	19	36	15	23	14	16	15	24	31	36	40	26
Total Anions	meq/L	0.01	-	-	40.1	27.3	-	68.4	-	198	66.2	134	68.6	77.8	66	116	151	186	203	175
Total Cations	meq/L	0.01	-	-	34.6	26.6	-	70.8	-	182	69.9	134	74.6	80.7	69	116	155	198	222	179
Ionic Balance	%	0.01	-	-	7.34	1.34	-	1.75	-	4.24	2.67	0.06	4.12	1.83	2.67	<0.01	1.15	3.21	4.56	1.13
Total Metals																				
Manganese	mg/L	0.001	1.9	-	0.32	0.106	1.44	1.25	1.65	1.38	1.19	1.66	1.38	1.6	1.19	1.8	1.61	**2.2**	**2.5**	**1.97**
Iron	mg/L	0.05	-	-	9.01	1.44	<0.05	0.31	0.32	0.16	0.43	0.26	1.87	0.45	0.53	0.27	0.16	0.54	0.36	0.25
Dissolved Metals																				
Manganese	mg/L	0.001	1.9	-	0.171	0.009	1.65	1.24	**1.99**	**2.31**	1.19	1.3	1.45	1.65	1.19	1.64	1.55	**2.05**	**2.29**	**2.08**
Iron	mg/L	0.05	-	-	2.75	0.07	0.23	0.98	0.68	0.46	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.24	0.23	0.14
Fluoride																				
Fluoride	mg/L	0.1	-	-	0.8	0.4	0.7	0.8	0.7	1.3	0.7	0.8	0.8	0.9	0.7	0.7	0.7	0.9	0.7	0.8
Nitrate, Nitrite & Ammonia																				
Ammonia as N	mg/L	0.01	0.9	-	1.04	0.02	0.03	0.05	0.12	<0.10	0.04	<0.1	0.11	0.07	0.04	0.08	0.07	0.07	0.02	0.13
Nitrite as N	mg/L	0.01	-	-	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.04	0.47	<0.01	<0.01	<0.01	0.08	1.02	0.02	0.02	0.01	1.12	0.01	0.06	0.04	0.02	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.04	**0.47**	<0.01	<0.01	<0.01	**0.08**	**1.02**	0.02	0.02	0.01	**1.12**	0.01	**0.06**	**0.04**	0.02	<0.01
Total Organic Carbon																				
Total Organic Carbon	mg/L	1	-	-	31	19	15	23	17	10	10	11	11	15	17	34	6	8	2	5
Monocyclic Aromatic Hydrocarbons																				
Benzene	µg/L	1	950	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
Napthalene																	-	-	-	-
Naphthalene	µg/L	7	16	-	-	-	-	-	-	<7	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds																	-	-	-	-
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-
Fumigants																				
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW3	GW3	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4
				Sample Date	21/03/2024	24/06/2024	16/09/2011	15/12/2011	22/06/2012	22/03/2012	18/09/2012	20/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																
Halogenated Aliphatic Compounds																				
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																				
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																				
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4
				Sample Date	16/03/2015	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018	13/09/2018	13/12/2018	14/03/2019
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																	
pH																					
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.32	6.99	7.25	**8.47**	7.16	7.31	7.16	7.46	6.96	7.05	7.33	7.16	7.29	7.11	7.15	6.82	7.16
Electrical Conductivity																					
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**12800**	**7770**	**11600**	**10100**	**9890**	**22500**	**15800**	**9700**	**21,200**	**23,600**	**21,000**	**12,500**	**1,900**	**15,800**	**21,300**	**20,600**	**22,800**
Alkalinity																					
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	62	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	840	1180	791	796	942	724	821	907	762	650	671	904	706	719	578	559	649
Total Alkalinity as CaCO3	mg/L	1	-	-	840	1180	791	858	942	724	821	907	762	650	671	904	706	719	578	559	649
Sulfate																					
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	659	375	476	549	393	1180	812	400	946	1090	809	575	932	1180	1240	1180	1280
Cations and Anions																					
Chloride	mg/L	1	-	-	3620	1770	3130	2850	2720	6990	4650	2650	6000	7460	5840	3360	6030	6500	7520	6560	7410
Calcium	mg/L	1	-	-	26	12	21	16	22	95	50	19	64	90	50	28	44	66	74	59	69
Magnesium	mg/L	1	-	-	358	164	232	214	274	839	596	181	572	792	549	339	510	706	792	624	747
Sodium	mg/L	1	-	-	2700	1490	1850	1850	2280	4050	3180	1840	3350	3920	3190	2360	2970	3560	3820	3380	3650
Potassium	mg/L	1	-	-	23	12	16	16	17	31	24	18	26	32	25	18	21	27	29	26	29
Total Anions	meq/L	0.01	-	-	133	81.3	114	109	62.5	-	164	101	204	246	195	125	204	222	249	221	249
Total Cations	meq/L	0.01	-	-	149	79.2	101	99.3	62.3	-	190	96.3	197	241	187	132	174	217	236	202	224
Ionic Balance	%	0.01	-	-	5.72	1.34	6.06	4.67	0.13	-	7.3	2.46	1.88	1.05	2.07	2.95	7.87	1.22	2.83	4.45	5.12
Total Metals																					
Manganese	mg/L	0.001	1.9	-	**6.83**	**2.26**	**3.57**	**2.46**	**2.67**	**5.54**	**3.58**	**1.98**	**3.43**	**4.46**	**4.32**	**4.93**	**2.98**	**-**	**2.66**	**2.89**	**3.38**
Iron	mg/L	0.05	-	-	2.6	0.72	1.34	0.84	1.04	1.12	0.64	0.66	1.41	1	1.25	1.23	0.51	-	0.09	0.46	0.56
Dissolved Metals																					
Manganese	mg/L	0.001	1.9	-	**5.99**	1.84	**2.68**	**2.16**	**2.53**	**5.52**	**3.22**	1.66	**3.17**	**3.2**	**3.2**	**2.69**	**2.82**	**2.86**	**3.18**	**2.77**	**3.49**
Iron	mg/L	0.05	-	-	0.19	0.46	<0.05	0.56	1.02	1.02	0.42	1.11	1.27	0.76	0.58	0.61	0.46	0.06	0.09	0.42	0.44
Fluoride																					
Fluoride	mg/L	0.1	-	-	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.8	0.6	0.7	0.7	0.8	0.6	0.8	1.1	0.7
Nitrate, Nitrite & Ammonia																					
Ammonia as N	mg/L	0.01	0.9	-	0.83	0.43	0.33	0.3	0.19	0.19	0.08	0.24	0.17	0.14	0.11	0.2	0.15	0.12	0.11	0.13	0.1
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	<0.01	0.02	0.02	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	<0.01	0.01	0.26	<0.01	<0.01	1.61	<0.01	<0.01	<0.01	0.06	<0.01	<0.01	0.02	-	<0.01	<0.01	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	<0.01	0.01	**0.26**	<0.01	<0.01	**1.61**	<0.01	<0.01	**0.07**	**0.06**	<0.01	<0.01	**0.04**	-	<0.01	<0.01	<0.01
Total Organic Carbon																					
Total Organic Carbon	mg/L	1	-	-	18	5	10	14	6	6	8	<1	7	6	7	8	6	6	3	3	3
Monocyclic Aromatic Hydrocarbons																					
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene					-																
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds					-																
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																					
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

				Sample ID	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4
				Sample Date	16/03/2015	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018	13/09/2018	13/12/2018	14/03/2019
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**																	
Halogenated Aliphatic Compounds																					
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																					
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																					
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW4	GW4	GW4	GW4	GW4	GW4
				Sample Date	13/06/2019	17/09/2019	16/12/2019	16/03/2020	16/06/2020	15/09/2020
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**						
pH										
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.26	7.18	7.55	7.38	7.06	6.69
Electrical Conductivity										
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**20,200**	**23,100**	**16,600**	**17,900**	**23,800**	**16,677**
Alkalinity										
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	554	588	571	545	618	649
Total Alkalinity as CaCO3	mg/L	1	-	-	544	588	571	545	618	649
Sulfate										
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	1210	1560	953	870	1440	815
Cations and Anions										
Chloride	mg/L	1	-	-	163	7710	5990	5630	8700	4520
Calcium	mg/L	1	-	-	66	89	47	39	98	35
Magnesium	mg/L	1	-	-	798	908	602	510	972	441
Sodium	mg/L	1	-	-	3670	4200	3360	3060	4460	2890
Potassium	mg/L	1	-	-	25	32	26	23	32	22
Total Anions	meq/L	0.01	-	-	231	262	200	188	288	157
Total Cations	meq/L	0.01	-	-	229	263	199	178	280	164
Ionic Balance	%	0.01	-	-	0.36	0.18	0.38	2.79	1.42	2.14
Total Metals										
Manganese	mg/L	0.001	1.9	-	**3.09**	**3.36**	**2.03**	1.65	**3.28**	**2.62**
Iron	mg/L	0.05	-	-	0.48	0.59	0.38	0.26	0.56	2.06
Dissolved Metals										
Manganese	mg/L	0.001	1.9	-	**2.8**	**3.62**	**2.09**	1.69	**3.21**	**2.68**
Iron	mg/L	0.05	-	-	<0.10	0.28	<0.05	0.27	0.56	1.65
Fluoride										
Fluoride	mg/L	0.1	-	-	0.7	0.7	0.7	0.7	0.5	0.7
Nitrate, Nitrite & Ammonia										
Ammonia as N	mg/L	0.01	0.9	-	0.1	0.08	0.13	0.08	0.08	0.36
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.03	0.15	<0.01	<0.01	<0.01	<0.01
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.03	**0.15**	<0.01	<0.01	<0.01	<0.01
Total Organic Carbon										
Total Organic Carbon	mg/L	1	-	-	2	6	<1	4	<1	6
Monocyclic Aromatic Hydrocarbons										
Benzene	µg/L	1	950	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-
Napthalene										
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-
Volitile Organic Compounds										
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-
Fumigants										
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5

Analyte	Units	LOR	ANZG 2018 Freshwater 95% protection	ANZECC 2000 Default Trigger Values	Sample ID	GW4	GW4	GW4	GW4	GW4
					Sample Date	13/06/2019	17/09/2019	16/12/2019	16/03/2020	16/06/2020	15/09/2020
Halogenated Aliphatic Compounds											
Dichlorodifluoromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-		<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-		<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-		<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-		<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-		<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-		<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-		<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-		<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-		<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds											
Chlorobenzene	µg/L	5	55	-		<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-		<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-		<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-		<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-		<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-		<5	<5	<5	<5	<5	<5
Trihalomethanes											
Chloroform	µg/L	5	770	-		<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-		<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
Groundwater
Fairfield City Council
Environmental Monitoring, FCC SRC, Wetherill Park

				Sample ID	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4
				Sample Date	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021	28/03/2022	15/06/2022	14/09/2022	12/12/2022	20/03/2023	9/06/2023	14/09/2023	15/12/2023	21/03/2024	24/06/2024
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**															
pH																			
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.27	6.71	7.93	6.65	7.05	7.02	7	6.69	6.69	6.7	6				6.77
Electrical Conductivity																			
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	**19,300**	**17,528**	**12,300**	**10,000**	**12,500**	**12,000**	**12,300**	**8,621**	**8,621**	560	5973				**10239**
Alkalinity																			
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	659	767	801	888	642	41	783	840	948	41	932	686	768	954	806
Total Alkalinity as CaCO3	mg/L	1	-	-	659	767	801	888	642	41	783	840	948	41	932	686	768	954	806
Sulfate																			
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	1100	860	637	578	443	9.2	804	553	319	8	417	809	404	306	586
Cations and Anions																			
Chloride	mg/L	1	-	-	5330	991	3590	3130	2140	27	8280	3960	1800	27	2340	4350	1960	1560	3490
Calcium	mg/L	1	-	-	48	23	25	20	13	16	125	38	10	17	13	25	13	10	22
Magnesium	mg/L	1	-	-	533	74	319	237	149	5.2	1110	350	123	3	168	370	220	118	259
Sodium	mg/L	1	-	-	3140	1010	2400	1900	1520	15	4740	2240	1400	9	1640	2650	1770	1380	2040
Potassium	mg/L	1	-	-	24	20	20	16	14	3	38	21	13	2	13	20	16	13	17
Total Anions	meq/L	0.01	-	-	186	160	130	118	82.4	34	266	140	76.4	1.75	93.3	153	79	69.4	127
Total Cations	meq/L	0.01	-	-	183	138	132	104	79.4	23	305	129	71.8	1.54	86.1	147	96.2	70.6	112
Ionic Balance	%	0.01	-	-	0.8	7.5	0.71	6.55	1.87	0.45	6.8	4.22	3.04	-	3.99	1.92	9.76	0.81	6.36
Total Metals																			
Manganese	mg/L	0.001	1.9	-	**2.78**	**2.75**	**2.7**	**2.8**	1.83	**5**	**9.24**	1.82	1.45	0.001	2.48	2.75	**3.78**	**0.986**	**2.35**
Iron	mg/L	0.05	-	-	1.54	1.16	1.04	0.78	0.97	7	1.96	0.48	0.96	<0.05	0.84	0.65	1.15	0.69	0.88
Dissolved Metals																			
Manganese	mg/L	0.001	1.9	-	**2.74**	**2.48**	**3.05**	**1.95**	1.55	**5**	**10.5**	1.86	1.26	<0.001	1.59	1.99	**2.44**	**0.933**	**2.18**
Iron	mg/L	0.05	-	-	1.43	0.54	1.02	0.61	0.59	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05
Fluoride																			
Fluoride	mg/L	0.1	-	-	0.7	0.7	0.6	0.9	0.7	0.88	0.8	0.6	0.7	1.1	<0.01	0.7	0.6	0.6	0.6
Nitrate, Nitrite & Ammonia																			
Ammonia as N	mg/L	0.01	0.9	-	0.22	0.75	0.8	**2.68**	**2.75**	0.41	**0.98**	0.48	0.57	0.28	0.39	0.34	0.18	0.37	0.26
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.03	0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	<0.01	<0.01	<0.01	<0.01	<0.01	0.47	<0.01	0.03	<0.01	0.14	<0.01	<0.01	0.45	0.06	0.07
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	**0.40**	<0.01	0.03	0.01	0.14	0.01	<0.01	**0.48**	**0.06**	**0.07**
Total Organic Carbon																			
Total Organic Carbon	mg/L	1	-	-	6	5	8	7	14	5.7	4	34	32	2	14	27	15	24	10
Monocyclic Aromatic Hydrocarbons																			
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Napthalene								-	-										
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volitile Organic Compounds								-	-										
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants								-	-										
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analyte	Units	LOR	ANZG 2018 Freshwater 95% protection	ANZECC 2000 Default Trigger Values	Sample ID	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4	GW4
					Sample Date	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021	28/03/2022	15/06/2022	14/09/2022	12/12/2022	20/03/2023	9/06/2023	14/09/2023	15/12/2023	21/03/2024	24/06/2024
Halogenated Aliphatic Compounds																			
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<5	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<5	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	100	-	<50	<50	<50	<50	<50	<0.3	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	-	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<5	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<1	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	700	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	270	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-DC	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	240	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	1900	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	330	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	70	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	400	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																			
Chlorobenzene	µg/L	5	55	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<0.3	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	10	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																			
Chloroform	µg/L	5	770	-	<5	<5	<5	<5	<5	74	<5	<5	<5	26	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	17	<5	<5	<5	5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Notes:

"-" Not analysed

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
				Sample Date	16/09/2011	15/12/2011	22/03/2012	22/06/2012	18/09/2012	18/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**														
pH																		
pH Value	pH Unit	0.01	-	6.5 - 8.0	8.00	**8.76**	**8.12**	7.94	7.99	7.62	7.93	8.00	7.99	7.45	7.76	7.99	**8.05**	7.82
Electrical Conductivity																		
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	1560	1420	1150	1050	670	1060	2180	1120	670	599	848	942	859	713
Suspended Solids																		
Total Suspended Solids	mg/L	5	-	-	-	-	-	-	-	6	9	11	-	12	10	<5	8	24
Alkalinity																		
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	29	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	160	146	207	160	86	102	226	142	86	76	135	112	187	117
Total Alkalinity as CaCO3	mg/L	1	-	-	160	175	207	160	86	102	226	142	86	76	135	112	187	117
Sulfate																		
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	135	299	236	91	42	39	120	124	42	56	68	56	137	75
Cations and Anions																		
Chloride	mg/L	1	-	-	335	142	112	182	131	258	496	182	131	86	139	181	88	83
Calcium	mg/L	1	-	-	32	25	32	32	21	28	51	30	21	22	28	25	23	24
Magnesium	mg/L	1	-	-	31	18	24	25	14	23	53	22	14	11	17	18	17	14
Sodium	mg/L	1	-	-	261	280	189	156	86	159	365	167	86	90	133	128	139	95
Potassium	mg/L	1	-	-	6	6	7	4	4	4	7	5	4	4	5	4	4	5
Total Anions	meq/L	0.01	-	-	-	13.7	12.2	-	6.29	10.1	21	10.6	6.29	5.11	8.26	8.51	9.07	6.24
Total Cations	meq/L	0.01	-	-	-	15.1	12.0	-	6.04	10.3	23	10.7	6.04	6.02	8.71	8.40	8.70	6.61
Ionic Balance	%	0.01	-	-	-	4.60	1.01	-	2.00	0.87	4.43	0.67	2.00	8.16	2.67	0.67	2.14	2.86
Total Metals																		
Manganese	mg/L	0.001	1.9	-	0.084	0.055	0.154	0.668	0.082	0.056	0.128	0.088	0.082	0.059	0.004	0.071	0.043	0.205
Iron	mg/L	0.05	-	-	0.1	0.15	0.08	0.56	0.1	0.12	0.27	0.45	0.28	0.14	0.08	0.32	0.12	3.61
Dissolved Metals																		
Manganese	mg/L	0.001	1.9	-	0.107	0.103	0.127	0.085	0.065	0.006	0.168	0.066	0.065	0.208	0.069	0.063	0.053	0.136
Iron	mg/L	0.05	-	-	0.7	1.56	3.89	0.43	0.28	0.12	0.79	<0.05	0.1	0.51	0.3	0.12	0.52	0.25
Fluoride																		
Fluoride	mg/L	0.1	-	-	0.7	0.6	0.7	0.6	0.8	13	0.8	0.9	0.8	0.4	0.7	0.8	0.8	0.4
Nitrate, Nitrite & Ammonia																		
Ammonia as N	mg/L	0.01	0.9	-	0.16	0.22	0.18	0.13	0.26	<0.10	0.02	0.07	0.26	0.19	0.12	0.03	0.32	0.42
Nitrite as N	mg/L	0.01	-	-	0.02	1.32	0.05	0.02	0.09	0.02	<0.01	0.02	0.09	0.22	0.03	<0.01	0.02	0.01
Nitrate as N	mg/L	0.01	2.4	-	0.23	**4.38**	0.68	0.65	0.47	0.08	0.17	0.55	0.47	0.58	0.15	0.12	0.11	0.08
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	**0.25**	**5.7**	**0.73**	**0.67**	**0.56**	**0.1**	**0.17**	**0.57**	**0.56**	**0.8**	**0.18**	**0.12**	**0.13**	**0.09**
Total Organic Carbon																		
Total Organic Carbon	mg/L	1	-	-	9	11	5	13	9	8	25	8	9	22	6	6	5	9
Oil & Grease																		
Oil & Grease	mg/L	5	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5
Monocyclic Aromatic Hydrocarbons																		
Benzene	µg/L	1	950	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	<2	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-
Fumigants															-	-		
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

					Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
					Sample Date	16/09/2011	15/12/2011	22/03/2012	22/06/2012	18/09/2012	18/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**															
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Napthalene																		
Naphthalene	µg/L	7	16	-	-	-	<7	-	-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons																		
Vinyl Acetate	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds																		
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																		
Chlorobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																		
Chloroform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	8	<5	6	20	20	6	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS

Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
				Sample Date	16/09/2011	15/12/2011	22/03/2012	22/06/2012	18/09/2012	18/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**														

Notes:

"-" - Not analysed

SUMMARY OF ANALYTICAL RESULTS

Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
				Sample Date	16/03/2015	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**														
pH																		
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.57	7.83	7.48	**8.13**	7.98	7.78	7.92	7.26	7.45	7.71	7.43	7.61	7.57	7.3
Electrical Conductivity																		
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	479	1080	449	1020	1370	933	1090	183	250	1190	764	1740	700	1950
Suspended Solids																		
Total Suspended Solids	mg/L	5	-	-	<5	<5	12	72	<5	54	13	137	40	15	15	25	54	114
Alkalinity																		
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	88	181	78	145	185	132	233	34	45	169	998	246	115	1090
Total Alkalinity as CaCO3	mg/L	1	-	-	88	181	78	145	185	132	233	34	45	169	98	246	115	1090
Sulfate																		
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	30	50	16	30	78	114	64	11	23	99	34	75	77	31
Cations and Anions																		
Chloride	mg/L	1	-	-	71	202	63	221	321	138	182	21	34	205	134	346	125	134
Calcium	mg/L	1	-	-	20	29	19	27	36	48	31	9	11	41	30	54	22	219
Magnesium	mg/L	1	-	-	11	24	9	20	26	20	23	3	5	27	14	20	12	84
Sodium	mg/L	1	-	-	64	145	46	140	209	102	165	23	27	159	100	243	111	146
Potassium	mg/L	1	-	-	3	6	3	7	5	6	4	3	3	6	5	24	5	12
Total Anions	meq/L	0.01	-	-	4.39	10.4	3.67	9.76	104	-	11.1	1.5	2.34	11.2	6.44	4.44	7.43	26.2
Total Cations	meq/L	0.01	-	-	4.76	9.88	3.77	9.26	123	-	10.7	1.77	2.21	11.3	7.13	4.08	7.04	24.5
Ionic Balance	%	0.01	-	-	4.12	2.35	1.31	2.61	8.57	-	1.87	-	-	0.52	5.02	4.23	2.66	3.36
Total Metals																		
Manganese	mg/L	0.001	1.9	-	0.266	1.52	0.131	0.226	0.092	0.099	0.107	0.065	0.043	0.111	0.236	0.102	0.174	0.151
Iron	mg/L	0.05	-	-	0.52	1.52	0.66	0.5	0.25	3.2	0.6	2.03	1.9	0.63	0.6	0.24	0.57	1.66
Dissolved Metals																		
Manganese	mg/L	0.001	1.9	-	0.078	0.089	0.136	0.202	0.094	0.062	0.092	0.024	0.019	0.093	0.175	0.0088	0.119	-
Iron	mg/L	0.05	-	-	0.14	0.11	0.22	0.38	0.12	0.16	0.17	0.13	0.32	0.13	0.31	0.16	0.23	-
Fluoride																		
Fluoride	mg/L	0.1	-	-	0.4	0.9	0.5	0.8	0.8	0.4	0.8	0.2	0.2	0.6	1.1	0.9	0.4	0.3
Nitrate, Nitrite & Ammonia																		
Ammonia as N	mg/L	0.01	0.9	-	0.32	0.75	0.49	**3.09**	**2.11**	0.35	0.6	0.68	0.09	0.33	**1.12**	**9.01**	**1.33**	**1.02**
Nitrite as N	mg/L	0.01	-	-	0.04	0.12	0.05	<0.01	0.01	0.07	0.05	0.07	0.4	0.07	<0.01	<0.01	0.03	0.01
Nitrate as N	mg/L	0.01	2.4	-	0.17	0.33	0.16	0.03	0.07	**0.85**	0.17	0.7	0.03	0.66	<0.01	<0.01	<0.01	-
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	**0.21**	**0.45**	**0.21**	0.03	**0.08**	**0.92**	**0.22**	0.01	0.43	**0.73**	<0.01	<0.01	0.02	-
Total Organic Carbon																		
Total Organic Carbon	mg/L	1	-	-	11	10	10	17	11	12	9	14	11	9	28	14	9	11
Oil & Grease																		
Oil & Grease	mg/L	5	-	-	<5	8	<5	8	<5	<5	6	10	<5	<5	<5	7	<5	<5
Monocyclic Aromatic Hydrocarbons																		
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																		
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
				Sample Date	16/03/2015	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**														
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Napthalene						-	-	-	-	-	-	-	-	-	-	-		
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons																		
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds																		
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																		
Chlorobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																		
Chloroform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS

Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
				Sample Date	16/03/2015	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**														
Notes:																		

"-" - Not analysed

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
				Sample Date	13/09/2018	13/12/2018	14/03/2019	13/06/2019	17/09/2019	16/12/2019	20/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**														
pH																		
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.74	7.58	7.41	7.71	7.19	7.83	7.91	7.69	**8.4**	6.95	7.7	7.3	7.72	7.22
Electrical Conductivity																		
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	991	1200	953	948	68	**2530**	1180	819	968	431	692	727	705	675
Suspended Solids																		
Total Suspended Solids	mg/L	5	-	-	16	55	56	42	69	42	86	<5	10	14	18	14	8	9
Alkalinity																		
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	128	168	125	133	17	292	198	157	163	94	164	150	96	92
Total Alkalinity as CaCO3	mg/L	1	-	-	128	168	125	133	17	292	198	157	163	94	164	150	96	92
Sulfate																		
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	71	110	62	91	6	81	137	70	81	30	57	70	29	44
Cations and Anions																		
Chloride	mg/L	1	-	-	208	226	190	163	4	645	168	119	222	58	101	102	52	50
Calcium	mg/L	1	-	-	35	40	29	28	5	52	36	29	28	22	23	26	16	15
Magnesium	mg/L	1	-	-	18	18	16	16	<1	40	22	18	22	8	14	15	7	7
Sodium	mg/L	1	-	-	127	177	135	130	4	401	159	112	169	53	104	96	47	59
Potassium	mg/L	1	-	-	5	9	5	3	1	22	6	4	5	4	5	4	3	3
Total Anions	meq/L	0.01	-	-	9.9	12	9.15	9.15	0.58	25.7	11.5	7.95	11.2	4.14	7.31	7.33	3.99	4.16
Total Cations	meq/L	0.01	-	-	8.88	11.4	8.76	8.52	0.45	23.9	10.7	7.9	10.7	4.16	6.95	6.81	3.5	3.97
Ionic Balance	%	0.01	-	-	5.45	2.63	2.14	3.55	-	3.68	3.92	0.31	2.37	0.3	2.53	3.39	-	2.42
Total Metals																		
Manganese	mg/L	0.001	1.9	-	0.12	0.154	0.1.4	0.069	0.054	0.200	0.280	0.047	0.111	0.076	0.056	0.043	0.036	0.049
Iron	mg/L	0.05	-	-	0.46	1.84	0.95	0.31	2.52	0.23	2.16	0.29	0.5	0.24	0.38	0.15	0.46	0.32
Dissolved Metals																		
Manganese	mg/L	0.001	1.9	-	0.007	0.130	0.109	0.019	0.020	0.158	0.025	0.042	0.054	0.081	0.062	0.040	0.040	0.042
Iron	mg/L	0.05	-	-	<0.05	0.16	0.11	0.14	0.2	0.12	0.18	0.11	0.06	0.48	0.12	0.14	0.1	0.14
Fluoride																		
Fluoride	mg/L	0.1	-	-	0.7	0.8	0.3	0.5	0.1	1.9	0.5	0.4	0.8	0.3	0.4	0.3	0.3	0.3
Nitrate, Nitrite & Ammonia																		
Ammonia as N	mg/L	0.01	0.9	-	0.25	**2.95**	**1.20**	**0.46**	0.08	**8.67**	0.46	0.10	0.39	0.10	0.15	0.18	0.06	0.09
Nitrite as N	mg/L	0.01	-	-	0.04	<0.01	0.07	<0.01	0.01	<0.01	0.08	0.02	0.03	0.04	0.04	0.04	<0.01	0.02
Nitrate as N	mg/L	0.01	2.4	-	0.03	<0.01	0.04	0.09	0.21	<0.01	0.23	0.39	0.17	0.23	0.34	1	0.31	0.28
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	**0.07**	<0.01	**0.11**	**0.09**	**0.22**	<0.01	**0.31**	**0.41**	**0.2**	**0.27**	**0.38**	**1.04**	**0.31**	**0.3**
Total Organic Carbon																		
Total Organic Carbon	mg/L	1	-	-	8	20	13	8	3	27	10	10	8	7	7	2	5	6
Oil & Grease																		
Oil & Grease	mg/L	5	-	-	<5	<5	<5	<5	<5	5	<5	<5	<5	<5	6	<5	<5	<5
Monocyclic Aromatic Hydrocarbons																		
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																		
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

					Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
					Sample Date	13/09/2018	13/12/2018	14/03/2019	13/06/2019	17/09/2019	16/12/2019	20/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**															
1.2-Dichloropropane	µg/L	5	900	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Napthalene																			
Naphthalene	µg/L	7	16	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons																			
Vinyl Acetate	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds																			
Dichlorodifluoromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																			
Chlorobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																			
Chloroform	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS

Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
				Sample Date	13/09/2018	13/12/2018	14/03/2019	13/06/2019	17/09/2019	16/12/2019	20/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**														

Notes:

"-" - Not analysed

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
				Sample Date	28/03/2022	15/06/2022	14/09/2022	12/12/2022	14/03/2023	9/06/2023	14/09/2023	15/12/2023	21/03/2024	24/06/2024
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**										
pH														
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.23		7.82	7.22	8.06	6.63				7.31
Electrical Conductivity														
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	660		1420	675	835	411				586
Suspended Solids														
Total Suspended Solids	mg/L	5	-	-	3	5		9	9	271		6	<5	66
Alkalinity														
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	35	232	246	90	159	109	136	135	118	162
Total Alkalinity as CaCO3	mg/L	1	-	-	35	232	246	90	159	109	136	135	118	162
Sulfate														
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	9.1	90	98	44	42	25	56	31	29	62
Cations and Anions														
Chloride	mg/L	1	-	-	26	312	384	55	164	75	260	109	102	152
Calcium	mg/L	1	-	-	14	39	49	15	27	23	33	26	26	36
Magnesium	mg/L	1	-	-	4.9	37	42	7	18	12	24	15	12	20
Sodium	mg/L	1	-	-	15	223	244	59	101	49	142	66	66	106
Potassium	mg/L	1	-	-	3.2	6	7	2	5	3	5	5	5	5
Total Anions	meq/L	0.01	-	-	-	15.3	17.8	4.16	8.68	4.81	11.2	6.42	5.84	8.82
Total Cations	meq/L	0.01	-	-	-	14.8	16.7	3.17	7.94	4.34	9.93	5.68	5.28	8.18
Ionic Balance	%	0.01	-	-	-	1.54	3.17	2.42	4.45	5.14	6.1	6.09	4.99	3.73
Total Metals														
Manganese	mg/L	0.001	1.9	-	54	0.074	0.257	0.049	0.055	0.091	0.08	0.103	0.133	0.149
Iron	mg/L	0.05	-	-	1.1	0.3	0.62	0.32	0.29	0.52	0.06	0.49	0.48	1.54
Dissolved Metals														
Manganese	mg/L	0.001	1.9	-	10	<0.001	0.001	0.042	0.002	0.019	0.016	0.003	0.009	0.042
Iron	mg/L	0.05	-	-	0.022	<0.05	<0.05	0.14	0.07	0.07	0.06	0.16	0.1	<0.05
Fluoride														
Fluoride	mg/L	0.1	-	-	0.81	0.7	0.7	0.3	0.5	<0.1	<0.1	<0.1	0.5	0.4
Nitrate, Nitrite & Ammonia														
Ammonia as N	mg/L	0.01	0.9	-	0.44	0.3	0.34	0.09	8.28	0.3	0.54	2.13	0.48	0.13
Nitrite as N	mg/L	0.01	-	-	0.30	0.11	0.05	0.02	0.18	0.06	0.04	0.06	0.07	0.05
Nitrate as N	mg/L	0.01	2.4	-	0.1	0.63	2.2	0.28	0.19	0.1	0.06	0.11	0.05	0.67
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	**0.4**	**0.74**	**2.25**	**0.3**	**0.37**	**0.16**	**0.1**	**0.17**	**0.12**	**0.72**
Total Organic Carbon														
Total Organic Carbon	mg/L	1	-	-	7.4	17	19		17	10	14	12	10	10
Oil & Grease														
Oil & Grease	mg/L	5	-	-	<5	<5	<5		<5	<5	<5	<5	<5	<5
Monocyclic Aromatic Hydrocarbons														
Benzene	µg/L	1	950	-	-	-	-		-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-		-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-		-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-		-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-		-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-		-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-		-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-		-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-		-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-		-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-		-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-		-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-		-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-		-	-	-	-	-	-
Fumigants														
2.2-Dichloropropane	µg/L	5	-	-	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

					Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
					Sample Date	28/03/2022	15/06/2022	14/09/2022	12/12/2022	14/03/2023	9/06/2023	14/09/2023	15/12/2023	21/03/2024	24/06/2024
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**											
1.2-Dichloropropane	µg/L	5	900	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-		-	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-		-	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Napthalene															
Naphthalene	µg/L	7	16	-		-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons															
Vinyl Acetate	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-		-	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds															
Dichlorodifluoromethane	µg/L	50	-	-		<5	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-		<5	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	-	-		<0.3	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-		-	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-		<5	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-		<1	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-		<0..5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-		<1	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-		<1	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-		-	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds															
Chlorobenzene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-		<0.3	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes															
Chloroform	µg/L	5	-	-		68	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-		15	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS

Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
				Sample Date	28/03/2022	15/06/2022	14/09/2022	12/12/2022	14/03/2023	9/06/2023	14/09/2023	15/12/2023	21/03/2024	24/06/2024
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**										
Notes:														

"-" - Not analysed

SUMMARY OF ANALYTICAL RESULTS

Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

					Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
					Sample Date	16/09/2011	15/12/2011	22/03/2012	22/06/2012	18/09/2012	18/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**															
pH																			
pH Value	pH Unit	0.01	-	6.5 - 8.0		7.39	7.54	7.37	7.42	7.9	7.25	7.41	7.39	7.9	7.51	7.02	7.32	7.31	7.51
Electrical Conductivity																			
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200		301	357	538	588	835	412	551	406	835	433	264	380	389	267
Suspended Solids																			
Total Suspended Solids	mg/L	5	-	-		-	-	-	-	-	161	34	30	-	38	42	<5	70	22
Alkalinity																			
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-		78	82	141	163	185	94	165	89	185	108	66	82	70	65
Total Alkalinity as CaCO3	mg/L	1	-	-		78	82	141	163	185	94	165	89	185	108	66	82	70	65
Sulfate																			
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-		20	31	14	31	28	18	<1	8	28	5	6	5	20	8
Cations and Anions																			
Chloride	mg/L	1	-	-		71	37	81	65	134	56	70	59	134	54	34	60	61	27
Calcium	mg/L	1	-	-		22	22	30	31	41	25	36	22	41	19	16	17	17	19
Magnesium	mg/L	1	-	-		9	7	12	13	18	9	13	8	18	9	5	7	7	6
Sodium	mg/L	1	-	-		51	38	63	65	96	40	54	38	96	43	30	40	47	24
Potassium	mg/L	1	-	-		4	4	7	6	7	4	5	3	7	4	3	3	3	2
Total Anions	meq/L	0.01	-	-		-	3.33	5.39	-	8.06	3.83	5.27		8.06		2.4	3.43	3.54	2.23
Total Cations	meq/L	0.01	-	-		-	3.43	5.4	-	7.88	3.83	5.34		7.88		2.59	3.29	3.55	2.54
Ionic Balance	%	0.01	-	-		-	1.5	0.09	-	1.12	0.03	0.07		1.12	1.67		2.11	0.13	-
Total Metals																			
Manganese	mg/L	0.001	1.9	-		0.149	0.213	1.56	0.141	0.783	**27.2**	0.38	0.722	0.783	0.325	<0.001	0.488	0.223	0.532
Iron	mg/L	0.05	-	-		0.18	0.32	1.69	0.25	0.56	45	0.33	2.96	0.56	0.79	0.12	2.34	0.32	3.00
Dissolved Metals																			
Manganese	mg/L	0.001	1.9	-		0.21	0.298	**1.93**	1.07	0.731	0.227	**10.4**	0.318	0.731	0.936	0.509	0.461	0.302	0.302
Iron	mg/L	0.05	-	-		0.5	1.19	2.33	1.7	0.29	0.6	21.9	0.31	0.29	5.11	2.32	1.67	1.07	1.19
Fluoride																			
Fluoride	mg/L	0.1	-	-		0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.4	0.3	0.2	0.3	0.2	0.2	0.2
Nitrate, Nitrite & Ammonia																			
Ammonia as N	mg/L	0.01	0.9	-		0.03	0.02	0.16	0.22	0.12	0.44	0.4	0.32	0.12	0.12	0.07	0.82	0.14	0.03
Nitrite as N	mg/L	0.01	-	-		<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01
Nitrate as N	mg/L	0.01	2.4	-		<0.01	0.03	0.1	0.02	0.01	0.02	0.02	0.02	0.01	0.03	0.03	0.03	0.23	0.02
Nitrite + Nitrate as N	mg/L	0.01	-	0.04		<0.01	0.03	**0.1**	0.02	0.01	0.03	0.02	0.02	0.01	0.03	0.03	**0.03**	**0.27**	**0.02**
Total Organic Carbon																			
Total Organic Carbon	mg/L	1	-	-		10	8	49	18	14	45	20	12	14	17	7	11	21	10
Oil & Grease																			
Oil & Grease	mg/L	5	-	-		-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	94	<5
Monocyclic Aromatic Hydrocarbons																			
Benzene	µg/L	1	950	-		-	-	<1	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-		-	-	<2	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-		-	-	<2	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-		-	-	<2	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-		-	-	<5	-	-	-	-	-	-	-	-	-	-	-
Fumigants																			
2.2-Dichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

					Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
					Sample Date	16/09/2011	15/12/2011	22/03/2012	22/06/2012	18/09/2012	18/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**															
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Napthalene																		
Naphthalene	µg/L	7	16	-	-	-	<7	-	-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons																		
Vinyl Acetate	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	<5	-	-	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds																		
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																		
Chlorobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																		
Chloroform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	20	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS

Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
				Sample Date	16/09/2011	15/12/2011	22/03/2012	22/06/2012	18/09/2012	18/12/2012	20/03/2013	17/06/2013	18/09/2013	16/12/2013	14/03/2014	16/06/2014	26/09/2014	16/12/2014
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**														

Notes:

"-" - Not analysed

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
				Sample Date	16/03/2015	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**														
pH																		
pH Value	pH Unit	0.01	-	6.5 - 8.0	7.27	7.36	7.28	7.89	7.2	7.6	7.54	7.06	7.47	7.48	7.07	7.29	7.2	7.13
Electrical Conductivity																		
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	362	542	592	481	494	1400	799	281	449	742	738	448	308	256
Suspended Solids																		
Total Suspended Solids	mg/L	5	-	-	28	8	83	142	64	1980	734	10	22	9	245	742	38	16
Alkalinity																		
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	78	158	121	98	135	178	235	43	74	181	124	129	86	81
Total Alkalinity as CaCO3	mg/L	1	-	-	78	158	121	98	135	178	235	43	74	181	124	129	86	81
Sulfate																		
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	12	12	17	27	4	222	8	21	70	27	5	3	5	2
Cations and Anions																		
Chloride	mg/L	1	-	-	53	64	84	70	62	216	118	40	46	83	125	64	50	36
Calcium	mg/L	1	-	-	21	30	33	29	30	82	44	14	24	42	34	22	18	16
Magnesium	mg/L	1	-	-	7	10	11	10	8	26	16	6	6	14	15	9	6	6
Sodium	mg/L	1	-	-	42	63	60	46	58	156	100	32	50	84	87	47	34	28
Potassium	mg/L	1	-	-	4	4	5	3	4	7	5	3	9	7	4	3	2	3
Total Anions	meq/L	0.01	-	-	3.30	5.21	5.14	4.49	14.4	-	8.19	2.42	4.23	6.52	6.11	4.44	3.23	2.68
Total Cations	meq/L	0.01	-	-	3.55	5.16	5.29	4.35	13.2	-	7.99	2.66	4.1	7.08	6.82	4.08	2.92	2.59
Ionic Balance	%	0.01	-	-	3.64	0.49	1.42	1.66	4.45	-	1.25	-	1.64	4.12	5.49	4.23	5.05	-
Total Metals																		
Manganese	mg/L	0.001	1.9	-	**2.65**	0.95	0.838	0.37	0.792	**3.16**	1.21	0.168	0.035	0.922	0.738	0.394	0.465	0.319
Iron	mg/L	0.05	-	-	15.5	1.66	2.26	0.87	8.4	192	6.85	0.88	0.87	2.2	9.21	11	4.13	3.04
Dissolved Metals																		
Manganese	mg/L	0.001	1.9	-	0.004	0.678	0.114	0.347	0.62	1.68	1.11	0.163	0.009	0.863	0.655	0.36	0.411	-
Iron	mg/L	0.05	-	-	0.18	0.62	1	0.29	2.32	1.48	2.94	0.53	0.12	0.91	5.45	2.23	1	-
Fluoride																		
Fluoride	mg/L	0.1	-	-	0.2	0.2	0.3	0.2	0.2	0.2	0.6	0.9	0.3	0.4	1.2	0.9	0.5	0.5
Nitrate, Nitrite & Ammonia																		
Ammonia as N	mg/L	0.01	0.9	-	0.02	0.08	<0.01	0.17	0.55	<0.10	0.24	0.12	0.02	0.22	0.46	**1.65**	0.03	0.52
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.55	<0.01	<0.01	<0.01	<0.01	0.03
Nitrate as N	mg/L	0.01	2.4	-	0.02	0.02	<0.01	0.08	0.02	<0.50	0.01	0.05	0.04	0.05	<0.01	<0.01	<0.01	-
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	**0.02**	0.02	<0.01	**0.08**	0.02	<0.50	0.01	**0.06**	0.59	**0.05**	<0.01	<0.01	<0.01	-
Total Organic Carbon																		
Total Organic Carbon	mg/L	1	-	-	46	11	20	16	42	32	25	13	7	8	70	14	24	13
Oil & Grease																		
Oil & Grease	mg/L	5	-	-	<5	7	15	9	33	<5	9	5	6	<5	5	7	9	<5
Monocyclic Aromatic Hydrocarbons																		
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																		
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
				Sample Date	16/03/2015	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**														
1.2-Dichloropropane	µg/L	5	900	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Napthalene																		
Naphthalene	µg/L	7	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons																		
Vinyl Acetate	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds																		
Dichlorodifluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																		
Chlorobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																		
Chloroform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS

Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
				Sample Date	16/03/2015	15/06/2015	14/10/2015	11/12/2015	29/03/2016	15/06/2016	15/09/2016	15/12/2016	15/03/2017	15/06/2017	15/09/2017	15/12/2017	15/03/2018	15/06/2018
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**														
Notes:																		

"-" - Not analysed

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
				Sample Date	13/09/2018	13/12/2018	14/03/2019	13/06/2019	17/09/2019	16/12/2019	20/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**														
pH																		
pH Value	pH Unit	0.01	-	6.5 - 8.0	6.89	7.1	6.92	7.05	6.5	7.39	7.26	6.77	7.17	6.67	6.82	6.49	7.26	7.03
Electrical Conductivity																		
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	225	264	296	289	73	473	395	396	422	280	412.9	180	221	305
Suspended Solids																		
Total Suspended Solids	mg/L	5	-	-	18	29	161	<5	62	68	16	9	34	16	33	36	31	25
Alkalinity																		
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	35	76	77	42	15	101	96	102	134	92	100	73	58	88
Total Alkalinity as CaCO3	mg/L	1	-	-	35	76	77	42	15	101	96	102	134	92	100	73	58	88
Sulfate																		
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	26	7	6	40	5	15	6	2	8	12	8	8	17	18
Cations and Anions																		
Chloride	mg/L	1	-	-	24	38	42	36	7	69	45	60	65	33	48	21	26	35
Calcium	mg/L	1	-	-	15	17	20	17	4	25	17	18	23	19	20	12	10	19
Magnesium	mg/L	1	-	-	4	5	60	5	1	7	6	6	8	6	6	3	3	6
Sodium	mg/L	1	-	-	18	31	34	29	8	56	46	51	63	30	40	21	26	37
Potassium	mg/L	1	-	-	3	3	2	3	2	4	6	4	6	4	4	2	2	5
Total Anions	meq/L	0.01	-	-	1.92	2.74	2.85	2.69	0.6	4.28	3.31	3.77	4.68	3.02	3.52	2.22	2.25	3.12
Total Cations	meq/L	0.01	-	-	1.94	2.68	3.02	2.6	0.68	4.36	3.5	3.71	4.7	2.85	3.33	1.81	1.93	3.18
Ionic Balance	%	0.01	-	-	-	-	2.96	-	-	0.98	2.7	0.79	0.24	2.89	2.69	-	-	0.93
Total Metals																		
Manganese	mg/L	0.001	1.9	-	0.21	0.289	0.369	0.239	0.22	0.375	0.213	0.212	0.312	0.213	0.273	0.083	0.063	0.164
Iron	mg/L	0.05	-	-	2.61	1.13	4.68	1.68	0.76	2.6	3.22	5.45	1.58	1.19	1.36	76	0.6	1.04
Dissolved Metals																		
Manganese	mg/L	0.001	1.9	-	0.18	0.231	0.343	0.218	0.013	0.245	0.212	0.191	0.3	0.217	0.242	0.08	0.061	0.161
Iron	mg/L	0.05	-	-	0.95	0.14	0.98	0.8	0.1	0.24	1.09	4.88	1.03	0.86	1.44	0.3	0.13	0.42
Fluoride																		
Fluoride	mg/L	0.1	-	-	0.3	0.4	0.3	0.1	0.2	0.5	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2
Nitrate, Nitrite & Ammonia																		
Ammonia as N	mg/L	0.01	0.9	-	0.36	0.06	0.21	0.62	0.06	0.03	0.44	0.36	0.07	0.04	0.2	0.08	<0.01	<0.01
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.02	<0.01	0.02	<0.01	0.23	<0.01	0.3	<0.01	<0.01	<0.01	<0.01	0.02	0.17	0.02
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.02	<0.01	0.02	<0.01	**0.23**	<0.01	**0.3**	<0.01	<0.01	<0.01	<0.01	0.03	**0.19**	0.02
Total Organic Carbon																		
Total Organic Carbon	mg/L	1	-	-	11	14	16	8	14	24	15	30	33	22	54	5	17	28
Oil & Grease																		
Oil & Grease	mg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	211	<5	<5	10
Monocyclic Aromatic Hydrocarbons																		
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants																		
2.2-Dichloropropane	µg/L	5	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

					Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
					Sample Date	13/09/2018	13/12/2018	14/03/2019	13/06/2019	17/09/2019	16/12/2019	20/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**															
1.2-Dichloropropane	µg/L	5	900	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Napthalene																			
Naphthalene	µg/L	7	16	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons																			
Vinyl Acetate	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds																			
Dichlorodifluoromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	21	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds																			
Chlorobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes																			
Chloroform	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS

Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
				Sample Date	13/09/2018	13/12/2018	14/03/2019	13/06/2019	17/09/2019	16/12/2019	20/03/2020	16/06/2020	15/09/2020	17/12/2020	11/03/2021	11/06/2021	14/09/2021	16/12/2021
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**														
Notes:																		

"-" - Not analysed

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
				Sample Date	28/03/2022	15/06/2022	14/09/2022	12/12/2022	14/03/2023	9/06/2023	14/09/2023	15/12/2023	21/03/2024	21/06/2024
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**										
pH														
pH Value	pH Unit	0.01	-	6.5 - 8.0	7		6.53	6.55	4.88	4.82				6.64
Electrical Conductivity														
Electrical Conductivity @ 25°C	µS/cm	1	-	125 - 2200	300		613	656	470	539				269
Suspended Solids														
Total Suspended Solids	mg/L	5	-	-	20	100		34	307	280	393	36	118	30
Alkalinity														
Hydroxide Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L	1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L	1	-	-	40	230	124	50	53	122	59	44	75	96
Total Alkalinity as CaCO3	mg/L	1	-	-	40	230	124	50	53	122	59	44	75	96
Sulfate														
Sulfate as SO4 - Turbidimetric	mg/L	1	-	-	9.1	15	13	74	<1	24	<1	11	17	25
Cations and Anions														
Chloride	mg/L	1	-	-	26	82	51	42	52	129	41	22	48	40
Calcium	mg/L	1	-	-	16	32	23	22	32	29	17	9	15	20
Magnesium	mg/L	1	-	-	5.3	16	12	8	10	11	6	3	5	7
Sodium	mg/L	1	-	-	15	87	42	44	46	89	28	17	39	46
Potassium	mg/L	1	-	-	2.9	7	4	4	6	11	4	3	6	6
Total Anions	meq/L	0.01	-	-	-	7.22	4.19	3.72	2.52	6.58	2.34	1.73	3.21	3.57
Total Cations	meq/L	0.01	-	-	-	6.88	4.06	3.77	4.57	6.5	2.66	1.51	3.01	3.73
Ionic Balance	%	0.01	-	-	-	2.44	1.48	0.64	28.8	0.54	-	-	3.16	2.21
Total Metals														
Manganese	mg/L	0.001	1.9	-	15	0.343	0.331	0.078	0.37	0.419	0.194	0.115	0.17	0.126
Iron	mg/L	0.05	-	-	0.23	0.82	10.1	0.68	14	16.5	10.9	2.01	2.56	1.97
Dissolved Metals														
Manganese	mg/L	0.001	1.9	-	9	0.317	0.206	0.078	0.402	0.397	0.173	0.105	0.113	0.083
Iron	mg/L	0.05	-	-	<5	0.48	0.68	0.68	13	16.6	9.73	1.14	1.88	0.58
Fluoride														
Fluoride	mg/L	0.1	-	-	0.88	0.2	0.3	0.2	0.2	<0.1	0.4	0.6	0.2	0.2
Nitrate, Nitrite & Ammonia														
Ammonia as N	mg/L	0.01	0.9	-	0.39	0.88	0.46	0.28	0.54	0.45	0.42	0.02	1.6	0.96
Nitrite as N	mg/L	0.01	-	-	<0.01	<0.01	<0.01	0.19	0.06	0.20	<0.01	<0.01	<0.01	<0.01
Nitrate as N	mg/L	0.01	2.4	-	0.1	0.01	<0.01	0.35	1.1	0.43	<0.01	<0.01	<0.01	0.02
Nitrite + Nitrate as N	mg/L	0.01	-	0.04	0.1	0.01	<0.01	**0.54**	**1.16**	**0.63**	<0.01	<0.01	<0.01	0.02
Total Organic Carbon														
Total Organic Carbon	mg/L	1	-	-	5	38	28	27	183	1940	167	12	117	10
Oil & Grease														
Oil & Grease	mg/L	5	-	-	<5	15	107	10	7	214	130	6	48	<5
Monocyclic Aromatic Hydrocarbons														
Benzene	µg/L	1	950	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-
meta- & para-Xylene	µg/L	2	75	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-
ortho-Xylene	µg/L	2	350	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-
1.3.5-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-
1.2.4-Trimethylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-
p-Isopropyltoluene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-
n-Butylbenzene	µg/L	5	-	-	-	-	-	-	-	-	-	-	-	-
Fumigants														
2.2-Dichloropropane	µg/L	5	-	-	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS
Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

					Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
					Sample Date	28/03/2022	15/06/2022	14/09/2022	12/12/2022	14/03/2023	9/06/2023	14/09/2023	15/12/2023	21/03/2024	21/06/2024
Analyte	**Units**	**LOR**	**ANZG 2018 Freshwater 95% protection**	**ANZECC 2000 Default Trigger Values**											
1.2-Dichloropropane	µg/L	5	900	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	µg/L	5	-	-		-	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	µg/L	5	-	-		-	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Napthalene															
Naphthalene	µg/L	7	16	-		-	-	-	-	-	-	-	-	-	-
Monocyclic Aromatic Hydrocarbons															
Vinyl Acetate	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-
2-Hexanone (MBK)	µg/L	50	-	-		-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	5	-	-		-	-	-	-	-	-	-	-	-	-
Halogenated Aliphatic Compounds															
Dichlorodifluoromethane	µg/L	50	-	-		<5	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloromethane	µg/L	50	-	-		<5	<50	<50	<50	<50	<50	<50	<50	<50	<50
Vinyl chloride	µg/L	50	-	-		<0.3	<50	<50	<50	<50	<50	<50	<50	<50	<50
Bromomethane	µg/L	50	-	-		-	<50	<50	<50	<50	<50	<50	<50	<50	<50
Chloroethane	µg/L	50	-	-		<5	<50	<50	<50	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	µg/L	50	-	-		<1	<50	<50	<50	<50	<50	<50	<50	<50	<50
1.1-Dichloroethene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Iodomethane	µg/L	5	-	-		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloroethane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.1-Trichloroethane	µg/L	5	-	-		<0..5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1-Dichloropropylene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichloroethane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2-Trichloroethane	µg/L	5	6500	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichloropropane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	µg/L	5	-	-		<0.5	<5	<5	45	45	<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	µg/L	5	-	-		<1	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	µg/L	5	-	-		<1	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichloropropane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Pentachloroethane	µg/L	5	-	-		-	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hexachlorobutadiene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Halogenated Aromatic Compounds															
Chlorobenzene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromobenzene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.3-Dichlorobenzene	µg/L	5	260	-		<0.3	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.4-Dichlorobenzene	µg/L	5	60	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2-Dichlorobenzene	µg/L	5	160	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	µg/L	5	170	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trihalomethanes															
Chloroform	µg/L	5	-	-		71	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	µg/L	5	-	-		16	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	µg/L	5	-	-		<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5

SUMMARY OF ANALYTICAL RESULTS

Surface Water

Fairfield City Council

Environmental Monitoring

Wetherill Park

				Sample ID	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
				Sample Date	28/03/2022	15/06/2022	14/09/2022	12/12/2022	14/03/2023	9/06/2023	14/09/2023	15/12/2023	21/03/2024	21/06/2024
Analyte	Units	LOR	ANZG 2018 Freshwater 95% protection	ANZECC 2000 Default Trigger Values										
Notes:														

"-" - Not analysed

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges

Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG1	14/10/2011	1.9	33	0.6	10	2.5	43
DDG1	15/11/2011	1.9	36	2.2	41	**4.1**	77
DDG1	16/12/2011	1.4	25	0.3	6	1.7	31
DDG1	16/01/2012	1.7	31	0.5	10	2.2	41
DDG1	14/02/2012	0.9	15	0.2	3	1.1	18
DDG1	16/03/2012	1.2	22	0.6	11	1.8	33
DDG1	16/04/2012	1.8	33	0.3	5	2.1	38
DDG1	16/05/2012	0.9	17	0.6	11	1.5	28
DDG1	14/06/2012	1.6	27	0.1	1	1.7	28
DDG1	13/07/2012	1.1	18	0.4	6	1.5	24
DDG1	16/08/2012	0.4	8	0.3	6	0.7	14
DDG1	18/09/2012	1.6	30	0.6	11	2.2	41
DDG1	18/10/2012	1.9	35	0.5	8	2.4	43
DDG1	15/11/2012	1.5	21	0.6	11	2.1	35
DDG1	18/12/2012	2.3	45	0.9	17	3.2	62
DDG1	15/01/2013	2.4	39	0.3	6	2.7	45
DDG1	13/02/2013	2.4	41	0.4	6	2.8	47
DDG1	18/03/2013	1.6	31	0.6	11	2.2	42
DDG1	17/04/2013	1.2	21	1.0	17	2.2	38
DDG1	17/05/2013	0.8	15	1.5	25	2.3	40
DDG1	17/06/2013	1.6	30	0.3	4	1.9	34
DDG1	16/07/2013	0.9	16	0.3	4	1.2	20
DDG1	14/08/2013	0.9	15	0.2	3	1.1	18
DDG1	17/09/2013	1.6	30	0.6	11	2.2	41
DDG1	17/10/2013	1.4	26	0.4	7	1.8	32
DDG1	14/11/2013	2.8	47	0.5	8	3.3	55
DDG1	16/12/2013	2.7	50	0.4	9	3.1	59
DDG1	13/01/2014	1.0	17	0.2	2	1.2	19
DDG1	11/02/2014	1.0	18	<0.1	<1	1.0	18
DDG1	14/03/2014	3.1	57	1.8	32	**4.9**	89
DDG1	14/04/2014	3.0	54	0.8	15	3.8	69
DDG1	16/05/2014	1.1	20	0.7	14	1.8	34
DDG1	16/06/2014	1.1	27	0.3	6	1.8	33
DDG1	14/07/2014	0.7	11	0.2	4	0.9	15
DDG1	14/08/2014	0.8	15	0.5	8	1.3	23
DDG1	16/09/2014	0.9	18	0.5	9	1.4	27
DDG1	17/10/2014	1.3	23	0.4	8	1.7	31
DDG1	14/11/2014	1.5	24	0.6	11	2.1	35
DDG1	16/12/2014	1.9	36	0.8	14	2.7	50
DDG1	15/01/2015	0.8	14	0.5	9	1.3	23
DDG1	13/02/2015	1.2	21	0.6	10	1.8	31
DDG1	16/03/2015	1.8	33	0.9	17	2.7	50
DDG1	14/04/2015	1.5	25	0.4	7	1.9	32
DDG1	14/05/2015	1.4	24	0.7	13	2.1	37
DDG1	15/06/2015	1.9	35	0.6	12	2.5	47
DDG1	15/07/2015	3.2	56	0.9	17	**4.1**	73
DDG1	14/08/2015	0.7	12	0.1	2	0.8	14
DDG1	15/09/2015	1.9	36	0.6	12	2.5	48
DDG1	14/10/2015	1.9	32	0.4	7	2.3	39
DDG1	13/11/2015	1.4	24	0.7	13	2.1	37
DDG1	11/12/2015	1.6	26	0.6	10	2.2	36
DDG1	16/01/2016	1.5	31	0.4	10	1.9	41
DDG1	17/02/2016	1.0	19	0.2	4	1.2	23
DDG1	17/03/2016	3.0	51	1.3	22	**4.3**	73
DDG1	15/04/2016	1.0	17	0.4	7	1.4	24
DDG1	16/05/2016	1.2	22	0.4	8	1.6	30
DDG1	15/06/2016	1.8	31	0.5	10	2.3	41
DDG1	14/07/2016	1.8	30	0.4	8	2.2	38
DDG1	15/08/2016	0.8	16	0.4	6	1.2	22
DDG1	15/09/2016	1.9	34	0.5	10	2.4	44
DDG1	25/10/2016	1.1	27	0.6	12	1.7	39
DDG1	14/11/2016	1.0	12	0.4	5	1.4	17
DDG1	15/12/2016	1.8	32	0.7	14	2.5	46

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG1	16/01/2016	1.1	21	0.7	12	1.8	33
DDG1	15/02/2017	2.1	37	0.7	12	2.8	49
DDG1	15/03/2017	2.5	41	0.8	13	3.3	54
DDG1	13/04/2017	0.8	13	0.3	5	1.1	18
DDG1	15/05/2017	0.2	3	<0.1	1	0.2	4
DDG1	15/06/2017	1.5	27	0.4	8	1.9	36
DDG1	14/07/2017	1.8	31	0.4	7	2.2	38
DDG1	15/08/2017	2.2	41	0.5	10	2.7	51
DDG1	15/09/2017	1.1	20	0.2	3	1.3	23
DDG1	13/10/2017	1.7	28	0.4	7	2.1	35
DDG1	15/11/2017	1.5	30	0.5	8	2.0	38
DDG1	15/12/2017	2.4	43	0.5	9	2.9	52
DDG1	15/01/2018	1.3	24	0.5	8	1.8	32
DDG1	16/02/2018	2.7	50	0.5	10	3.2	60
DDG1	15/03/2018	1.9	31	1.4	21	3.3	52
DDG1	16/04/2018	1.8	34	0.5	10	2.3	44
DDG1	14/05/2018	1.6	26	0.3	5	1.9	31
DDG1	15/06/2018	1.5	28	0.4	7	1.9	35
DDG1	16/07/2018	1.1	20	0.4	8	1.5	28
DDG1	16/08/2018	1.0	17	0.2	5	1.2	22
DDG1	13/09/2018	2.2	37	0.7	12	2.9	49
DDG1	15/10/2018	1.7	32	0.5	9	2.2	41
DDG1	15/11/2018	1.3	24	0.6	10	1.9	34
DDG1	13/12/2018	1.4	23	0.4	5	1.8	28
DDG1	14/01/2019	2.3	43	0.8	16	3.1	59
DDG1	15/02/2019	2.2	42	0.6	11	2.8	53
DDG1	14/03/2019	2.3	37	0.5	7	2.8	44
DDG1	16/04/2019	1.1	20	0.5	11	1.6	31
DDG1	14/05/2019	1.0	17	0.2	4	1.2	21
DDG1	13/06/2019	1.0	18	0.5	8	1.5	26
DDG1	15/07/2019	1.4	28	0.4	8	1.8	34
DDG1	14/08/2019	0.3	5	0.2	3	0.5	8
DDG1	17/09/2019	1.8	37	0.8	16	2.6	53
DDG1	14/10/2019	1.3	21	0.5	8	1.8	29
DDG1	14/11/2019	1.4	26	0.6	11	2.0	37
DDG1	16/12/2019	6.8	129	2.5	46	**9.3**	175
DDG1	15/01/2020	3.6	64	0.9	16	**4.5**	80
DDG1	14/02/2020	4.8	84	1.0	1.9	**5.8**	103
DDG1	16/03/2020	1.0	18	0.7	13	1.7	31
DDG1	16/04/2020	0.9	16	0.7	12	1.6	28
DDG1	14/05/2020	0.7	12	0.6	10	1.3	22
DDG1	16/06/2020	1.3	25	0.6	11	1.9	36
DDG1	15/07/2020	1.2	20	0.5	9	1.7	29
DDG1	17/08/2020	0.6	12	0.5	9	1.1	21
DDG1	15/09/2020	1.2	21	0.8	13	2.0	34
DDG1	16/10/2020	0.8	14	0.7	14	1.5	28
DDG1	13/11/2020	Location removed at the time of sampling.					
DDG1	17/12/2020	New dust gauge installed.					
DDG1	14/01/2021	1.0	16.0	0.8	13.0	1.8	29.0
DDG1	15/02/2021	1.5	28.0	0.5	9.0	2.0	37.0
DDG1	11/03/2021	2.4	34.0	0.6	8.0	3.0	42.0
DDG1	15/04/2021	0.3	7.0	0.3	6.0	0.6	13.0
DDG1	19/05/2021	1.8	37.0	0.7	14.0	2.6	51.0
DDG1	11/06/2021	3.0	40.0	1.1	16.0	4.1	56.0
DDG1	15/07/2021	2.5	51.0	0.7	13.0	3.2	64.0
DDG1	12/08/2021	1.2	20.0	0.4	7.0	1.6	27.0
DDG1	14/09/2021	1.8	31.0	0.6	12.0	2.4	43.0
DDG1	15/10/2021	1.8	33.0	0.8	14.0	2.6	47.0
DDG1	12/11/2021	1.4	23.0	0.8	14.0	2.2	37.0
DDG1	16/12/2021	1.5	31.0	0.6	11.0	2.1	42.0
DDG1	14/01/2022	1.0	17.0	0.4	7.0	1.4	24.0
DDG1	16/02/2022	1.4	27.0	0.7	13.0	2.1	40.0
DDG1	17/03/2022	1.0	17.0	0.3	6.0	1.3	23.0

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG1	14/04/2022	0.2	3.0	0.3	6.0	0.5	9.0
DDG1	13/05/2022	0.2	3.0	<0.1	<2	0.2	4.0
DDG1	15/06/2022	0.2	3.0	<0.1	<2	0.2	3.0
DDG1	18/07/2022	0.2	4.0	<0.1	<2	0.2	4.0
DDG1	17/08/2022	2.7	47.0	0.6	12.0	3.3	59.0
DDG1	14/09/2022	2.3	38.0	0.6	10.0	2.9	48.0
DDG1	12/10/2022	1.8	30.0	1.2	19.0	3.0	49.0
DDG1	18/11/2022	0.1	2.0	<0.1	<2	0.1	2.0
DDG1	12/12/2022	2.1	30.0	0.7	10.0	2.8	40.0
DDG1	13/01/2023	0.1	2.0	<0.1	<2	0.1	2.0
DDG1	17/02/2023	0.9	19.0	0.3	5.0	1.2	24.0
DDG1	14/03/2023	1.2	17.0	0.4	7.0	1.6	24.0
DDG1	14/04/2023	2.3	42.0	0.8	15.0	3.1	57.0
DDG1	17/05/2023	2.1	40.0	0.9	19.0	3.0	59.0
DDG1	09/06/2023	1.2	16.0	0.3	4.0	1.5	20.0
DDG1	10/07/2023	1.9	34.0	0.5	9.0	2.4	43.0
DDG1	15/08/2023	2.7	57.0	1.1	24.0	3.8	81.0
DDG1	14/09/2023	2.1	43.0	1.0	15.0	1.0	18.0
DDG1	13/10/2023	2.4	41.0	0.8	14.0	3.2	55.0
DDG1	15/11/2023	1.7	34.0	0.9	17.0	2.2	42.0
DDG1	15/12/2023	-	-	-	-	0.7	12.0
DDG1	17/01/2024	0.9	18.0	0.6	11.0	1.5	29.0
DDG1	19/02/2024	1.4	27.0	0.6	11.0	2.0	38.0
DDG1	21/03/2024	1.3	23.0	0.9	17.0	2.2	40.0
DDG1	22/04/2024	1.5	29.0	0.4	7.0	1.9	36.0
DDG1	24/05/2024	1.2	23.0	0.5	9.0	1.7	32.0
DDG1	24/06/2024	2.4	43.0	0.7	14.0	3.1	57.0
DDG1	25/07/2024	1.3	24.0	0.5	8.0	1.8	32.0
DDG1	22/08/2024	2.5	42.0	0.8	12.0	3.3	54.0
DDG1	20/09/2024	1.2	20	0.4	8	1.6	28
DDG1	18/10/2024	1.5	25	0.4	7	1.9	32
* Source: *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA 2016)							

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges

Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG2	14/10/2011	1.3	23	0.6	10	1.9	33
DDG2	15/11/2011	1.4	27	0.6	11	2.0	38
DDG2	16/12/2011	0.4	7	<0.1	1	0.4	8
DDG2	16/01/2012	0.7	14	0.3	4	1.0	18
DDG2	14/02/2012	0.5	8	<0.1	1	0.5	9
DDG2	16/03/2012	0.7	13	0.4	7	1.1	20
DDG2	16/04/2012	1.1	20	0.3	5	1.4	25
DDG2	16/05/2012	0.8	14	0.2	5	1.0	19
DDG2	14/06/2012	2.0	33	0.2	4	2.2	37
DDG2	13/07/2012	1.1	18	0.2	3	1.3	21
DDG2	16/08/2012	0.8	16	0.4	8	1.2	24
DDG2	18/09/2012	3.0	57	0.8	15	3.8	72
DDG2	18/10/2012	2.6	47	0.6	11	3.2	58
DDG2	15/11/2012	1.3	22	0.4	6	1.7	28
DDG2	20/12/2012	1.3	26	0.5	9	1.8	35
DDG2	15/01/2013	1.4	23	0.4	7	1.8	30
DDG2	13/02/2013	0.9	16	0.3	5	1.2	21
DDG2	18/03/2013	0.5	9	0.3	7	0.9	16
DDG2	17/04/2013	1.4	24	0.6	12	2.0	36
DDG2	17/05/2013	1.4	25	0.6	11	2.0	36
DDG2	17/06/2013	1.4	26	0.2	3	1.6	29
DDG2	16/07/2013	0.7	12	0.1	1	0.8	13
DDG2	14/08/2013	0.9	16	0.2	2	1.1	18
DDG2	17/09/2013	3.0	57	0.8	15	3.8	72
DDG2	17/10/2013	4.4	81	0.9	15	**5.3**	96
DDG2	14/11/2013	6.3	104	0.9	15	**7.7**	127
DDG2	16/12/2013	3.2	61	0.4	6	3.6	67
DDG2	13/01/2014	1.2	20	0.2	3	1.4	23
DDG2	11/02/2014	1.3	23	0.1	2	1.4	25
DDG2	14/03/2014	2.4	44	1.1	19	3.5	63
DDG2	14/04/2014	1.5	27	0.5	10	2.0	37
DDG2	16/05/2014	1.1	21	0.3	6	1.4	27
DDG2	16/06/2014	3.1	56	0.2	5	3.3	61
DDG2	14/07/2014	2.2	37	0.3	5	2.5	42
DDG2	14/08/2014	4.7	85	1.1	20	**5.8**	105
DDG2	16/09/2014	1.8	35	0.6	12	2.4	47
DDG2	17/10/2014	3.9	71	1.0	19	**4.9**	90
DDG2	14/11/2014	2.1	34	0.7	13	2.8	47
DDG2	16/12/2014	4.7	88	1.2	23	**5.9**	111
DDG2	15/01/2015	1.1	20	0.4	6	1.5	26
DDG2	13/02/2015	1.8	31	0.4	7	2.2	38
DDG2	16/03/2015	6.6	121	9.0	164	**15.6**	285
DDG2	14/04/2015	5.2	88	0.7	12	**5.9**	100
DDG2	14/05/2015	5.0	88	0.9	16	**5.9**	104
DDG2	15/06/2015	2.1	40	0.6	10	2.7	50
DDG2	15/07/2015	7.4	131	0.7	13	**8.1**	144
DDG2	14/08/2015	3.5	62	0.4	7	3.9	69
DDG2	15/09/2015	11.1	210	1.7	32	**12.8**	242
DDG2	14/10/2015	8.3	142	1.5	25	**9.8**	167
DDG2	13/11/2015	4.4	78	1.2	21	**5.6**	99
DDG2	11/12/2015	4.1	67	0.9	16	**5.0**	83
DDG2	16/01/2016	1.3	28	0.4	8	1.7	36
DDG2	17/02/2016	Location not accessible at time of sampling.					
DDG2	17/03/2016	6^^	102^^	1.8^^	31^^	**7.8^^**	133^^
DDG2	15/04/2016	5.9	101	1.1	19	**7.0**	120
DDG2	16/05/2016	10.9	205	1.6	30	**12.5**	235
DDG2	15/06/2016	0.9	16	19.8	**349**	**20.7**	365
DDG2	14/07/2016	10.9	187	1.3	22	**12.2**	209
DDG2	15/08/2016	4.4	82	0.7	14	**5.1**	96
DDG2	15/09/2016	6.5	118	0.9	18	**7.4**	
DDG2	25/10/2016	2.1	49	0.5	12	2.6	61
DDG2	14/11/2016	1.2	14	0.4	5	1.6	19
DDG2	15/12/2016	1.6	30	0.5	9	2.1	39

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges

Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG2	16/01/2016	1.0	19	0.4	7	1.4	26

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG2	15/02/2017	3.2	56	1.1	20	**4.3**	76
DDG2	15/03/2017	3.0	49	0.6	10	3.6	59
DDG2	13/04/2017	1.0	17	0.2	4	1.2	21
DDG2	15/05/2017	1.0	19	0.3	5	1.3	24
DDG2	15/06/2017	2.0	37	0.4	7	2.4	44
DDG2	14/07/2017	0.5	9	0.4	6	0.9	15
DDG2	15/08/2017	1.6	31	0.5	8	2.1	39
DDG2	15/09/2017	0.5	9	<0.1	<1	0.3	6
DDG2	13/10/2017	0.9	15	0.1	2	1.0	17
DDG2	15/11/2017	1.0	19	0.2	5	1.2	24
DDG2	15/12/2017	1.3	23	0.2	3	1.5	26
DDG2	15/01/2018	1.6	30	0.5	9	2.1	39
DDG2	16/02/2018	1.5	29	0.4	6	1.9	35
DDG2	15/03/2018	1.8	29	1.2	19	3.0	48
DDG2	16/04/2018	0.8	15	0.3	5	1.1	20
DDG2	14/05/2018	1.9	32	0.3	5	2.2	37
DDG2	15/06/2018	1.3	24	0.4	8	1.7	32
DDG2	16/07/2108	1.2	21	0.4	8	1.6	29
DDG2	16/08/2108	0.3	6	0.2	2	0.5	8
DDG2	13/09/2018	1.2	20	0.6	10	1.8	30
DDG2	15/10/2018	1.9	35	0.8	15	2.7	50
DDG2	15/11/2018	0.7	12	0.6	11	1.3	23
DDG2	13/12/2018	1.0	16	0.4	7	1.4	23
DDG2	14/01/2019	4.5	85	3.0	56	**7.5**	141
DDG2	15/02/2018	4.4	83	1.2	23	**5.6**	106
DDG2	14/03/2018	3.8	61	1.0	15	**4.8**	76
DDG2	15/04/2019	1.8	34	0.7	14	2.5	48
DDG2	14/05/2019	1.8	30	0.1	3	1.9	33
DDG2	13/06/2019	0.5	9	0.3	5	0.8	14
DDG2	15/07/2019	0.8	16	0.4	6	1.2	22
DDG2	14/08/2019	0.3	6	0.2	2	0.5	8
DDG2	17/09/2019	1.8	37	0.7	14	2.5	51
DDG2	14/10/2019	2.3	37	0.7	10	3.0	47
DDG2	14/11/2019	2.6	48	0.7	13	3.3	61
DDG2	16/12/2019	7.9	148	3.3	63	**11.2**	211
DDG2	15/01/2020	3.2	56	0.9	17	**4.1**	73
DDG2	14/02/2020	5.5	98	1.6	27	**7.1**	125
DDG2	16/03/2020	1.9	35	0.9	17	2.8	52
DDG2	16/04/2020	1.2	22	0.8	13	2.0	35
DDG2	14/05/2020	0.6	10	0.6	10	1.2	20
DDG2	16/06/2020	1.2	24	0.5	9	1.7	33
DDG2	15/07/2020	0.9	16	0.5	8	1.4	24
DDG2	17/08/2020	0.5	10	0.4	8	0.9	18
DDG2	15/09/2020	1.4	24	0.5	8	1.9	32
DDG2	16/10/2020	1.6	30	0.7	12	2.3	42
DDG2	13/11/2020	2.1	35	1.1	17	3.2	52
DDG2	17/12/2020	5.0	101	1.2	23	**6.2**	124
DDG2	14/01/2021	0.8	14	0.7	11	1.5	25
DDG2	15/02/2021	1.9	36	0.3	5	2.2	41
DDG2	11/03/2021	3.7	53	0.8	10	**4.5**	63
DDG2	15/04/2021	0.4	9	0.4	8	0.8	17
DDG2	19/05/2021	1.1	22	0.3	6	1.4	28
DDG2	11/06/2021	0.9	12	0.4	5	1.3	17
DDG2	15/07/2021	0.7	15	0.2	3	0.9	18
DDG2	12/08/2021	0.3	5	0.1	2	0.4	7
DDG2	14/09/2021	1.3	23	0.6	10	1.9	33
DDG2	15/10/2021	2.4	44	0.8	15	3.2	59
DDG2	12/11/2021	2.6	43	0.7	12	3.3	55
DDG2	16/12/2021	2.9	58	0.6	12	2.1	42
DDG2	14/01/2022	2.6	45	0.7	11	3.3	56
DDG2	16/02/2022	3.6	70	1.0	19	**4.6**	89
DDG2	17/03/2022	1.2	20	0.2	4	1.4	24
DDG2	14/04/2022	1.0	17	0.5	8	1.5	25

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Dust Deposition Gauges

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Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG2	13/05/2022	0.5	8	0.4	8	0.9	16
DDG2	15/06/2022	0.4	8	0.2	4	0.6	12
DDG2	18/07/2022	0.8	16	0.8	16	1.6	32
DDG2	17/08/2022	0.8	14	0.1	2	0.9	16
DDG2	14/09/2022	2.1	34	0.4	8	2.5	42
DDG2	12/10/2022	1.5	24	1.2	20	2.7	44
DDG2	18/11/2022	1.3	28	1.4	30	2.7	58
DDG2	12/12/2022	3.3	46	1.1	16	4.4	62
DDG2	13/01/2023	2.2	42	0.8	15	3.0	57
DDG2	17/02/2023	1.5	30	0.3	8	1.8	38
DDG2	14/03/2023	3.3	49	0.6	9	3.9	58
DDG2	14/04/2023	2.9	53	0.9	16	3.8	69
DDG2	17/05/2023	0.8	15	0.5	11	1.3	26
DDG2	09/06/2023	0.3	4	<0.1	<2	0.4	5
DDG2	10/07/2023	0.4	8.0	<0.1	<2	0.4	8
DDG2	15/08/2023	0.6	12.0	0.3	7.0	0.9	19
DDG2	14/09/2023	0.5	11.0	0.2	6.0	1.2	19
DDG2	13/10/2023	0.9	16	0.6	9	1.5	25
DDG2	15/11/2023	1.1	14	0.5	5	2.5	48
DDG2	15/12/2023	-	-	-	-	**4.1**	72
DDG2	17/01/2024	0.1	<2	1	21	1.1	22
DDG2	19/02/2024	0.7	14	0.4	8	1.1	22
DDG2	21/03/2024	0.7	12	0.3	6	1	18
DDG2	22/04/2024	0.7	14	0.8	15	1.5	29
DDG2	24/05/2024	0.3	5	0.2	4	0.5	9
DDG2	24/06/2024	0.3	6	0.3	5	0.6	11
DDG2	25/07/2024	0.2	4	0.1	2	0.3	6
DDG2	22/08/2024	0.7	12	0.5	8	1.2	20
DDG2	20/09/2024	0.5	9	0.3	4	0.8	13
DDG2	18/10/2024	0.9	15	0.4	6	1.3	21

* Source: *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA 2016)
^^: Dust gauge left in the field two months. Results may not be representative.

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG3	14/10/2011	3.0	51	0.9	16	3.9	67
DDG3	15/11/2011	5.0	95	1.2	21	**6.2**	116
DDG3	16/12/2011	2.1	38	0.5	9	2.6	47
DDG3	16/01/2012	0.8	16	0.2	2	1.0	18
DDG3	14/02/2012	1.7	29	0.5	9	2.2	38
DDG3	16/03/2012	1.5	27	<0.1	<1	1.5	27
DDG3	16/04/2012	2.6	48	0.3	5	2.9	53
DDG3	16/05/2012	0.9	16	0.6	12	1.5	28
DDG3	14/06/2012	2.7	44	0.5	9	3.2	53
DDG3	13/07/2012	1.8	30	0.3	5	2.1	35
DDG3	16/08/2012	0.6	11	0.3	7	0.9	18
DDG3	18/09/2012	1.9	35	0.5	11	2.4	45
DDG3	18/10/2012	4.6	84	1.0	18	**5.6**	102
DDG3	15/11/2012	2.2	37	0.6	9	2.8	46
DDG3	20/12/2012	2.5	48	0.6	13	3.1	61
DDG3	15/01/2013	2.3	38	0.5	8	2.8	46
DDG3	13/02/2013	2.1	36	0.5	8	2.6	44
DDG3	18/03/2013	2.2	43	0.7	14	2.9	57
DDG3	17/04/2013	2.9	52	0.8	13	3.7	65
DDG3	17/05/2013	1.1	20	0.8	13	1.9	33
DDG3	17/06/2013	2.0	36	0.4	7	2.4	43
DDG3	16/07/2013	1.6	27	0.3	6	1.9	33
DDG3	14/08/2013	1.8	31	0.2	3	2.0	34
DDG3	17/09/2013	1.9	35	0.5	11	2.4	46
DDG3	17/10/2013	1.5	27	0.4	7	1.9	34
DDG3	14/11/2013	2.8	47	0.8	12	3.6	59
DDG3	16/12/2013	3.1	58	0.3	7	3.4	65
DDG3	13/01/2014	2.2	37	0.8	13	3.0	50
DDG3	11/02/2014	5.4	95	0.7	13	**6.1**	108
DDG3	14/03/2014	3.5	63	1.2	22	**4.7**	85
DDG3	14/04/2014	2.8	51	0.9	16	3.7	67
DDG3	16/05/2014	1.1	21	0.4	8	1.5	29
DDG3	16/06/2014	2.0	36	0.3	6	2.3	42
DDG3	14/07/2014	1.3	21	0.3	5	1.6	26
DDG3	14/08/2014	2.6	47	0.7	14	3.3	61
DDG3	16/09/2014	1.4	27	0.2	5	1.6	32
DDG3	17/10/2014	3.2	59	0.9	16	**4.1**	75
DDG3	14/11/2014	3.3	55	1.0	16	**4.3**	71
DDG3	16/12/2014	2.8	52	1.0	19	3.8	71
DDG3	15/01/2015	3.6	64	1.2	20	**4.8**	84
DDG3	13/02/2015	2.6	44	0.9	15	3.5	59
DDG3	16/03/2015	3.7	68	0.8	15	**4.5**	83
DDG3	14/04/2015	3.7	64	0.8	13	**4.5**	77
DDG3	14/05/2015	1.4	25	0.6	11	2.0	36
DDG3	15/06/2015	1.6	30	0.4	8	2.0	38
DDG3	15/07/2015	4.1	73	1.0	17	**5.1**	90
DDG3	14/08/2015	1.0	18	0.1	1	1.1	19
DDG3	15/09/2015	4.9	92	1.0	20	**5.9**	112
DDG3	14/10/2015	4.2	72	1.4	23	**5.6**	95
DDG3	13/11/2015	4.0	70	1.1	20	**5.1**	90
DDG3	11/12/2015	4.2	70	1.4	22	**5.6**	92
DDG3	16-01-216	0.1	2	<0.1	<1	0.4	2
DDG3	17/02/2016	3.9	73	0.9	17	**4.8**	90
DDG3	17/03/2016	6.3	107	1.8	31	**8.1**	138
DDG3	15/04/2016	2.7	44	0.3	5	2.9	49
DDG3	16/05/2016	3.9	71	1.1	20	**5.0**	91
DDG3	15/06/2016	3.5	61	0.5	10	**4.0**	71
DDG3	14/07/2016	2.5	42	0.5	10	3.0	52
DDG3	15/08/2016	1.3	25	0.4	7	1.7	32
DDG3	15/09/2016	3.2	59	0.7	12	3.9	71
DDG3	25/10/2016	2.1	50	0.8	19	2.9	69
DDG3	14/11/2016	1.9	22	0.7	9	2.6	31
DDG3	15/12/2016	2.4	44	1.1	19	3.5	63

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG3	16/01/2016	1.4	26	0.6	11	2.0	37
DDG3	15/02/2017	2.6	46	1.0	17	3.6	63
DDG3	15/03/2017	3.0	50	0.9	15	3.9	65
DDG3	13/04/2017	1.3	23	0.6	9	1.9	32
DDG3	15/05/2017	1.2	22	0.3	7	1.5	29
DDG3	15/06/2017	3.1	56	0.7	13	3.8	69
DDG3	14/07/2017	1.2	21	0.2	3	1.4	24
DDG3	15/08/2017	2.5	47	0.6	12	3.1	59
DDG3	15/09/2017	0.3	6	<0.1	<1	0.3	6
DDG3	13/10/2017	1.6	26	0.2	4	1.8	30
DDG3	15/11/2017	1.7	34	0.4	7	2.1	41
DDG3	15/12/2017	2.0	35	0.3	5	1.5	26
DDG3	15/01/2018	3.1	57	0.8	15	3.9	64
DDG3	16/02/2018	2.4	46	0.5	8	2.9	54
DDG3	15/03/2018	1.7	27	0.3	5	2.0	32
DDG3	16/04/2018	1.1	21	0.4	7	1.5	28
DDG3	14/05/2018	1.6	27	0.3	4	1.9	31
DDG3	15/06/2018	1.6	30	0.3	6	1.9	36
DDG3	16/07/2018	1.7	31	0.7	13	2.4	44
DDG3	16/08/2018	1.3	23	0.2	4	1.5	27
DDG3	13/09/2018	1.9	33	0.7	11	2.6	44
DDG3	15/10/2018	2.0	38	0.4	8	2.4	46
DDG3	15/11/2018	2.3	42	0.9	16	3.2	58
DDG3	13/12/2018	3.0	47	1.0	16	**4.0**	63
DDG3	14/01/2019	2.7	51	1.3	25	**4.0**	76
DDG3	15/02/2019	3.3	63	0.7	12	**4.0**	75
DDG3	14/03/2019	3.1	49	0.7	12	3.8	61
DDG3	15/04/2019	1.3	25	0.5	9	1.8	34
DDG3	14/05/2019	2.0	35	0.7	11	2.7	46
DDG3	13/06/2019	1.0	18	0.6	10	1.6	28
DDG3	15/07/2019	1.8	30	0.5	9	0.5	10
DDG3	14/08/2019	0.3	5	0.2	4	0.5	9
DDG3	17/09/2019	1.8	37	0.8	16	2.6	53
DDG3	14/10/2019	1.8	28	0.5	9	2.3	37
DDG3	14/11/2019	3.1	57	0.8	14	3.9	71
DDG3	16/12/2019	3.7	69	1.0	19	**4.7**	88
DDG3	15/01/2020	2.7	47	0.8	14	3.5	61
DDG3	14/02/2020	5.8	103	1.4	24	**7.2**	127
DDG3	16/03/2020	1.1	20	0.5	10	1.6	30
DDG3	16/04/2020	0.8	14	0.6	11	1.4	25
DDG3	14/05/2020	1.2	20	0.6	10	1.8	30
DDG3	16/06/2020	1.5	29	0.5	10	2.0	39
DDG3	15/07/2020	1.3	23	0.4	6	1.7	29
DDG3	17/08/2020	0.5	9	0.3	7	0.8	16
DDG3	15/09/2020	1.5	25	0.5	9	2.0	34
DDG3	16/10/2020	1.7	31	0.6	11	2.3	42
DDG3	13/11/2020	1.8	29	0.6	10	2.4	39
DDG3	17/12/2020	3.3	66	1.3	26	**4.6**	92
DDG3	14/01/2021	1.0	16	0.6	10	1.6	26
DDG3	15/02/2021	4.2	80	0.6	11	**4.8**	91
DDG3	11/03/2021	2.3	33	0.6	8	2.9	41
DDG3	15/04/2021	1.9	39	0.8	17	2.7	56
DDG3	19/05/2021	1.0	20	0.2	4	1.2	24
DDG3	11/06/2021	2.3	31	0.7	10	3.0	41
DDG3	15/07/2021	1.6	33	0.5	9	2.1	42
DDG3	12/08/2021	1.0	16	0.4	7	1.4	23
DDG3	14/09/2021	1.5	27	0.7	12	2.2	39
DDG3	15/10/2021	1.8	33	0.8	15	2.6	48
DDG3	12/11/2021	2.6	43	0.8	13	3.4	56
DDG3	16/12/2021	1.6	33	0.4	7	2.0	40
DDG3	14/01/2022	1.2	21	0.8	13	2.0	34
DDG3	16/02/2022	1.6	32	1.0	19	2.6	51
DDG3	17/03/2022	0.5	9	0.2	3	0.7	12

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges

Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG3	14/04/2022	-	-	-	-	-	-
DDG3	13/05/2022	0.9	16	0.7	11	1.6	27
DDG3	15/06/2022	1.0	19	0.4	8	1.4	27
DDG3	18/07/2022	1.5	29	0.7	13	2.2	42
DDG3	17/08/2022	1.1	20	0.3	5	1.4	25
DDG3	12/10/2022	0.7	12	0.5	8	1.2	20
DDG3	18/11/20222	0.3	7	0.4	9	0.7	16
DDG3	12/12/2022	1.8	25	1.2	17	3.0	42
DDG3	13/01/2023	0.9	17	0.5	10	1.4	27
DDG3	17/02/2023	1.6	34	0.4	8	2.0	42
DDG3	14/03/2023	0.4	6	0.1	2	0.5	8
DDG3	14/04/2023	0.5	10	0.3	5	0.8	15
DDG3	17/05/2023	1.1	21	0.6	13	1.7	34
DDG3	09/06/2023	0.4	5	<0.1	<2	0.4	5
DDG3	10/07/2023	0.8	14.0	0.2	5.0	1.0	19
DDG3	15/08/2023	1.0	21.0	0.4	8.0	1.4	29
DDG3	14/09/2023	1.1	17.0	0.3	7.0	4.1	29
DDG3	13/10/2023	1.3	22.0	0.3	6.0	1.6	28.0
DDG3	15/11/2023	1.0	21.0	0.4	6.1	1.2	24.0
DDG3	15/12/2023	-	-	-	-	3.3	58.0
DDG3	17/01/2024	0.9	14.0	0.5	10.0	1.4	27.0
DDG3	19/02/2024	1.0	19.0	0.5	11.0	1.5	30.0
DDG3	21/03/2024	1.6	29.0	0.8	14.0	2.4	43.0
DDG3	22/04/2024	0.9	17.0	0.6	11.0	1.5	28.0
DDG3	24/05/2024	0.5	9.0	0.3	7.0	0.8	16.0
DDG3	24/06/2024	0.7	13.0	0.3	6.0	1.0	19.0
DDG3	25/07/2024	0.4	8.0	0.3	4.0	0.7	12.0
DDG3	22/08/2024	0.9	15.0	0.4	7.0	1.3	22.0
DDG3	20/09/2024	0.6	10.0	0.3	5.0	0.9	15.0
DDG3	18/10/2024	1.1	18.0	0.4	6.0	1.5	24.0

* Source: *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA 2016)

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG4	14/10/2011	3.2	55	1.2	20	**4.4**	75
DDG4	15/11/2011	3.8	71	3.2	61	**7.0**	132
DDG4	16/12/2011	1.4	26	1.3	23	2.7	49
DDG4	16/01/2012	2.8	52	1.8	34	**4.6**	86
DDG4	14/02/2012	1.6	28	1.3	21	2.9	49
DDG4	16/03/2012	1.6	30	0.5	8	2.1	38
DDG4	16/04/2012	3.0	55	0.7	12	3.7	67
DDG4	16/05/2012	1.5	28	0.8	14	2.3	42
DDG4	14/06/2012	2.7	45	0.6	10	3.3	55
DDG4	13/07/2012	1.8	30	0.4	6	2.2	36
DDG4	16/08/2012	1.2	23	0.5	10	1.7	33
DDG4	18/09/2012	4.3	81	1.3	24	**5.6**	105
DDG4	18/10/2012	3.2	58	0.7	14	3.9	72
DDG4	15/11/2012	2.2	37	0.6	10	2.8	47
DDG4	20/12/2012	2.6	51	1.3	24	3.9	75
DDG4	15/01/2013	2.2	37	0.6	9	2.8	46
DDG4	13/02/2013	1.9	33	0.6	10	2.5	43
DDG4	18/03/2013	1.3	25	0.7	14	2.0	39
DDG4	17/04/2013	2.9	51	0.7	13	3.6	64
DDG4	17/05/2013	1.5	27	1.3	22	2.8	49
DDG4	17/06/2013	1.9	35	0.7	13	2.6	48
DDG4	16/07/2013	1.1	18	0.4	8	1.5	26
DDG4	14/08/2013	1.3	23	0.3	4	1.6	27
DDG4	17/09/2013	4.3	81	1.3	24	**5.6**	105
DDG4	17/10/2013	4.5	82	1.3	23	**5.8**	105
DDG4	14/11/2013	6.8	112	0.9	15	**7.7**	127
DDG4	16/12/2013	2.9	54	0.4	9	3.3	63
DDG4	13/01/2014	1.2	20	0.3	5	1.5	25
DDG4	11/02/2014	1.5	26	0.2	4	1.7	30
DDG4	14/03/2014	3.2	59	1.1	20	**4.3**	79
DDG4	14/04/2014	3.0	54	0.7	13	3.7	67
DDG4	16/05/2014	1.6	31	0.6	10	2.2	41
DDG4	16/06/2014	4.2	77	0.9	16	**5.1**	93
DDG4	14/07/2014	2.2	37	0.6	9	2.8	46
DDG4	14/08/2014	6.7	122	1.9	35	**8.6**	157
DDG4	16/09/2014	1.6	32	0.5	8	2.1	40
DDG4	17/10/2014	6.3	115	1.8	33	**8.1**	148
DDG4	14/11/2014	2.5	42	0.7	11	3.2	53
DDG4	16/12/2014	2.9	55	0.9	16	3.8	71
DDG4	15/01/2015	1.7	30	0.6	11	2.3	41
DDG4	13/02/2015	1.9	32	1.1	19	3.0	51
DDG4	16/03/2015	2.4	44	0.7	13	3.1	57
DDG4	14/04/2015	2.1	36	0.2	4	2.3	40
DDG4	14/05/2015	1.9	33	1.0	18	2.9	51
DDG4	15/06/2015	2.0	37	0.4	9	2.4	46
DDG4	15/07/2015	2.3	40	0.7	13	3.0	53
DDG4	14/08/2015	1.0	17	0.2	5	1.2	22
DDG4	15/09/2015	3.7	70	1.1	21	**4.8**	91
DDG4	14/10/2015	3.2	54	1.0	18	**4.2**	72
DDG4	13/11/2015	3.7	65	0.9	16	**4.6**	81
DDG4	11/12/2015	3.5	57	0.9	16	**4.4**	73
DDG4	16/01/2016	1.7	35	0.4	10	2.4	45
DDG4	17/02/2016	2.0	38	0.4	7	2.4	45
DDG4	17/03/2016	5.4	92	1.5	26	**6.9**	118
DDG4	15/04/2016	2.6	44	0.3	5	2.9	49
DDG4	16/05/2016	3.9	71	1.1	20	**5.0**	91
DDG4	15/06/2016	3.9	69	1.0	18	**4.9**	87
DDG4	14/07/2016	2.1	36	0.4	7	2.5	43
DDG4	15/08/2016	1.1	21	0.3	6	1.4	27
DDG4	15/09/2016	3.7	67	0.4	8	**4.1**	75
DDG4	25/10/2016	2.1	50	0.7	15	2.8	65
DDG4	14/11/2016	1.7	20	0.5	6	2.2	26
DDG4	15/12/2016	3.2	58	0.9	17	**4.1**	75

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges

Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG4	16/01/2016	2.0	37	0.5	10	2.5	47
DDG4	15/02/2017	3.0	53	1.0	17	4.0	70
DDG4	15/03/2017	2.1	35	1.0	16	3.1	51
DDG4	13/04/2017	1.9	32	0.9	15	2.8	47
DDG4	15/05/2017	1.6	30	0.4	8	2.0	38
DDG4	15/06/2017	4.3	78	1.9	35	**6.2**	113
DDG4	14/07/2017	2.2	37	0.3	6	2.5	43
DDG4	15/08/2017	3.0	57	0.7	12	3.7	69
DDG4	15/09/2017	1.8	32	0.5	10	2.3	42
DDG4	13/10/2017	3.8	63	1.1	17	**4.9**	80
DDG4	15/11/2017	2.0	39	0.8	16	2.8	55
DDG4	15/12/2017	2.8	50	0.4	7	3.2	57
DDG4	15/01/2018	2.7	49	0.8	15	3.5	64
DDG4	16/02/2018	2.1	40	0.4	8	2.5	48
DDG4	15/03/2018	2.3	36	0.3	6	2.6	42
DDG4	16/04/2018	2.3	43	0.7	13	3.0	56
DDG4	14/05/2018	2.0	33	0.4	7	2.4	40
DDG4	15/06/2018	1.4	27	0.5	8	1.9	35
DDG4	16/07/2018	2.4	44	0.7	12	3.1	56
DDG4	16/08/2018	0.1	1	<0.1	<1	0.1	1
DDG4	13/09/2018	5.1	87	1.2	21	**6.3**	108
DDG4	15/10/2018	1.9	36	0.6	11	2.5	47
DDG4	15/11/2018	2.3	42	0.7	13	3.0	55
DDG4	13/12/2018	2.1	34	1.0	16	3.1	50
DDG4	14/01/2019	4.3	81	1.3	25	**5.6**	106
DDG4	15/02/2019	3.6	68	0.6	12	**4.2**	80
DDG4	14/03/2019	2.9	46	0.7	11	3.6	57
DDG4	15/04/2019	2.7	50	0.7	14	3.4	64
DDG4	14/05/2019	2.5	43	0.6	10	3.1	53
DDG4	13/06/2019	1.8	31	0.6	11	2.4	42
DDG4	15/07/2019	2.2	41	0.7	14	2.9	55
DDG4	14/08/2019	0.6	11	0.4	6	1.0	17
DDG4	17/09/2019	1.2	25	1.0	20	2.2	45
DDG4	14/10/2019	8.0	127	3.4	55	**11.4**	182
DDG4	14/11/2019	4.0	73	1.2	22	**5.2**	95
DDG4	16/12/2019	3.7	70	0.8	15	**4.5**	85
DDG4	15/01/2020	2.4	43	0.9	16	3.3	59
DDG4	14/02/2020	6.6	117	1.6	28	**8.2**	145
DDG4	16/03/2020	1.2	21	0.7	13	1.9	34
DDG4	16/04/2020	1.1	20	0.8	13	1.9	33
DDG4	14/05/2020	3.5	60	0.8	14	**4.3**	74
DDG4	16/06/2020	2.6	50	1.5	30	**4.1**	80
DDG4	15/07/2020	2.5	43	0.8	14	3.3	57
DDG4	17/08/2020	1.6	31	0.6	12	2.2	43
DDG4	15/09/2020	2.8	48	0.7	11	3.5	59
DDG4	16/10/2020	3.9	71	1.1	20	**5.0**	91
DDG4	13/11/2020	3.1	51	0.9	15	**4.0**	66
DDG4	17/12/2020	5.3	107	1.2	24	**6.5**	131
DDG4	14/01/2021	1.2	19	0.7	13	1.9	32

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG4	15/02/2021	4.7	89	1.1	21	**5.8**	110
DDG4	11/03/2021	3.2	45	1.2	17	**4.4**	62
DDG4	15/04/2021	1.1	22	0.7	16	1.8	38
DDG4	19/05/2021	4.6	92	1.2	24	**5.8**	116
DDG4	11/06/2021	3.8	52	0.8	10	**4.6**	62
DDG4	15/07/2021	2.1	43	0.7	14	2.8	57
DDG4	12/08/2021	0.9	15	0.3	5	1.2	20
DDG4	14/09/2021	0.2	4	0.2	3	0.4	7
DDG4	15/10/2021	1.8	33	0.8	15	2.6	48
DDG4	12/11/2021	1.8	30	1.3	21	3.1	51
DDG4	16/12/2021	3.6	72	3.9	79	**7.5**	151
DDG4	14/01/2022	1.5	25	1.5	26	3.0	51
DDG4	16/02/2022	1.0	20	0.6	12	1.6	32
DDG4	17/03/2022	1.1	18	0.9	16	2.0	34
DDG4	14/04/2022	1.6	26	1.7	29	3.3	55
DDG4	13/05/2022	1.8	31	1.2	21	3.0	52
DDG4	15/06/2022	1.5	29	0.9	17	2.4	46
DDG4	18/07/2022	2.0	38	0.7	15	2.7	53
DDG4	17/08/2022	3.1	55	1.2	21	**4.3**	76
DDG4	14/09/2022	1.0	17	0.5	8	1.5	25
DDG4	12/10/2022	1.5	24	1.0	18	2.5	42
DDG4	18/11/2022	0.6	13	0.9	19	1.5	32
DDG4	12/12/2022	2.8	40	3.3	46	**6.1**	86
DDG4	13/01/2023	1.3	24	2.5	48	**3.8**	72
DDG4	17/02/2023	2.1	43	1.6	33	**3.7**	76
DDG4	14/03/2023	1.4	20	1.7	26	**3.1**	46
DDG4	14/04/2023	1.5	28	1.5	27	3	55
DDG4	17/05/2023	2.3	44	1.7	34	4	78
DDG4	09/06/2023	1.7	23	0.2	3	1.9	26
DDG4	10/07/2023	1.9	35.0	0.6	11.0	2.5	46
DDG4	15/08/2023	1.9	40.0	0.8	17.0	2.7	57
DDG4	14/09/2023	1.6	30.0	0.6	12.0	2.1	26
DDG4	13/10/2023	1.9	33	0.7	11	2.6	44
DDG4	15/11/2023	1.5	23	0.9	10	1.6	28
DDG4	15/12/2023	-	-	-	-	**5.1**	91
DDG4	17/01/2024	1.4	27	0.8	15	2.2	42
DDG4	19/02/2024	0.9	18	0.8	16	1.7	34
DDG4	21/03/2024	1.6	29	0.9	16	2.5	45
DDG4	22/04/2024	1	18	1	19	2	37
DDG4	24/05/2024	0.4	7	0.3	6	0.7	13
DDG4	24/06/2024	0.9	16	0.5	10	1.4	26
DDG4	25/07/2024	0.5	10	0.3	4	0.8	14
DDG4	22/08/2024	1.3	21	0.6	10	1.9	31
DDG4	20/09/2024	0.7	12	0.4	6	1.1	18
DDG4	18/10/2024	1.5	24	0.7	12	2.2	36
* Source: *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA 2016)							
DDG5	14/10/2011	2.2	37	1.7	30	3.9	67
DDG5	15/11/2011	2.9	55	1.2	22	**4.1**	77
DDG5	16/12/2011	1.0	18	2.3	42	3.3	60
DDG5	16/01/2012	2.3	43	2.9	55	**5.2**	98
DDG5	14/02/2012	0.3	5	0.1	1	0.4	6
DDG5	16/03/2012	0.7	12	1.6	30	2.3	42
DDG5	16/04/2012	3.0	54	1.2	23	**4.2**	77
DDG5	16/05/2012	1.0	18	0.7	13	1.7	31
DDG5	14/06/2012	1.1	18	0.3	5	1.4	23
DDG5	13/07/2012	0.5	9	0.2	2	0.7	11
DDG5	16/08/2012	0.6	12	0.3	5	0.9	17
DDG5	18/09/2012	2.3	43	0.5	10	2.8	53
DDG5	18/10/2012	2.1	39	0.7	13	2.8	52
DDG5	15/11/2012	1.4	23	0.7	12	2.1	35
DDG5	20/12/2012	2.1	40	1.0	21	3.1	61
DDG5	15/01/2013	2.1	35	0.5	8	2.6	43
DDG5	13/02/2013	1.1	18	0.2	4	1.3	22

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG5	18/03/2013	0.5	9	0.4	8	0.9	17
DDG5	17/04/2013	1.4	25	0.6	10	2.0	35
DDG5	17/05/2013	1.2	21	0.8	15	2.0	36
DDG5	17/06/2013	1.3	23	0.7	13	2.0	36
DDG5	16/07/2013	2.0	35	2.0	34	4.0	69
DDG5	14/08/2013	0.9	16	1.0	16	1.9	32
DDG5	17/09/2013	2.3	43	0.5	10	2.8	53
DDG5	17/10/2013	1.4	25	0.6	12	2.0	37
DDG5	14/11/2013	2.6	43	0.4	7	3.0	50
DDG5	16/12/2013	1.9	35	0.9	18	2.8	53
DDG5	13/01/2014	0.6	10	0.4	6	1.0	16
DDG5	11/02/2014	0.4	7	0.2	3	0.6	10
DDG5	14/03/2014	1.6	30	1.2	21	2.8	51
DDG5	14/04/2014	1.1	20	0.6	11	1.7	31
DDG5	16/05/2014	0.6	12	0.2	4	0.8	16
DDG5	16/06/2014	1.3	24	0.2	4	1.5	28
DDG5	14/07/2014	0.7	11	<0.1	1	0.7	12
DDG5	14/08/2014	1.6	29	0.4	8	2.0	37
DDG5	16/09/2014	0.6	11	0.1	3	0.7	14
DDG5	17/10/2014	1.2	22	0.7	13	1.9	35
DDG5	14/11/2014	0.8	14	0.6	9	1.4	23
DDG5	16/12/2014	1.1	20	2.0	39	3.1	59
DDG5	15/01/2015	2.7	48	0.9	15	3.6	63
DDG5	13/02/2015	0.5	8	0.4	7	0.9	15
DDG5	16/03/2015	1.2	22	0.7	12	1.9	34
DDG5	14/04/2015	1.3	22	0.9	15	2.2	37
DDG5	14/05/2015	1.4	24	1.1	21	2.5	45
DDG5	15/06/2015	1.2	22	0.3	7	1.5	29
DDG5	15/07/2015	2.2	39	1.1	19	3.3	58
DDG5	14/08/2015	0.5	9	0.1	1	0.6	10
DDG5	15/09/2015	1.9	35	0.8	15	2.7	50
DDG5	14/10/2015	1.9	32	0.7	13	2.6	45
DDG5	13/11/2015	2.0	36	1.7	29	3.7	65
DDG5	11/12/2015	2.7	45	3.1	51	**5.8**	96
DDG5	16/01/2016	1.2	26	0.6	13	1.8	39
DDG5	17/02/2016	1.0	19	0.2	4	1.2	23
DDG5	17/03/2016	1.5	26	1.1	19	2.6	45
DDG5	15/04/2016	1.1	19	0.1	2	1.2	21
DDG5	16/05/2016	2.0	37	0.8	14	2.8	51
DDG5	15/06/2016	2.7	47	0.8	14	3.5	61
DDG5	14/07/2016	1.8	31	0.4	7	2.2	38
DDG5	15/08/2016	0.8	15	0.3	6	1.1	21
DDG5	15/09/2016	1.8	33	0.6	11	2.4	44
DDG5	25/10/2016	1.2	29	0.4	9	1.6	38
DDG5	14/11/2016	1.4	17	0.5	5	1.9	22
DDG5	15/12/2016	1.3	23	0.7	14	2.0	37
DDG5	16/01/2016	1.1	21	0.8	15	1.9	36
DDG5	15/02/2017	1.3	23	0.8	14	2.1	37
DDG5	15/03/2017	0.7	12	0.5	8	1.2	20
DDG5	13/04/2017	0.6	10	0.4	7	1.0	17
DDG5	15/05/2017	0.6	12	0.4	6	1.0	18
DDG5	15/06/2017	1.9	34	1.2	22	3.1	56
DDG5	14/07/2017	0.5	8	<0.1	<1	0.5	8
DDG5	15/08/2017	2.1	39	0.6	11	2.7	50
DDG5	15/09/2017	0.4	8	0.1	2	0.5	10
DDG5	13/10/2017	1.2	19	0.4	7	1.6	26
DDG5	15/11/2017	0.9	17	0.5	10	1.4	27
DDG5	15/12/2017	1.3	23	0.3	5	1.6	28
DDG5	15/01/2018	1.6	29	1.0	18	2.6	47
DDG5	16/02/2018	2.1	40	0.6	10	2.7	50
DDG5	15/03/2018	14.0	22	0.3	5	1.7	27
DDG5	16/04/2018	1.1	20	0.1	3	1.2	23
DDG5	14/05/2018	1.2	19	<0.1	<1	1.2	19

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges
Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG5	15/06/2018	1.1	21	0.2	3	1.3	24
DDG5	16/07/2018	1.2	21	0.8	16	2.0	37
DDG5	16/08/2018	1.0	17	0.4	7	1.4	24
DDG5	13/09/2018	1.6	27	0.7	12	2.3	39
DDG5	15/10/2018	1.3	25	1.0	19	2.3	44
DDG5	15/11/2018	1.5	27	1.2	23	2.7	50
DDG5	13/12/2018	1.2	19	3.3	52	**4.5**	71
DDG5	14/01/2019	5.6	105	3.3	63	**8.9**	168
DDG5	15/02/2019	1.6	31	0.3	4	1.9	35
DDG5	14/03/2019	1.1	17	0.2	4	1.3	21
DDG5	15/04/2019	0.4	7	<0.1	<1	0.4	7
DDG5	14/05/2019	1.2	21	0.5	8	1.7	29
DDG5	13/06/2019	1.0	17	0.7	13	1.7	30
DDG5	15/07/2019	0.8	16	0.5	8	1.3	24
DDG5	14/08/2019	0.7	13	1.2	21	1.9	34
DDG5	17/09/2019	1.3	27	0.7	13	2.0	40
DDG5	14/10/2019	2.7	43	2.6	41	**5.3**	84
DDG5	14/11/2019	1.3	23	0.4	8	1.7	31
DDG5	16/12/2019	2.4	45	0.7	13	3.1	58
DDG5	15/01/2020	2.2	38	0.6	12	2.8	50
DDG5	14/02/2020	4.6	82	1.5	26	**6.1**	108
DDG5	16/03/2020	0.9	16	1.1	21	2.0	37
DDG5	16/04/2020	1.0	17	0.6	12	1.6	29
DDG5	14/05/2020	1.0	17	0.6	13	1.8	30
DDG5	16/06/2020	0.9	17	0.6	12	1.5	29
DDG5	15/07/2020	0.8	14	0.2	3	1.0	17
DDG5	17/08/2020	0.6	12	0.8	16	1.4	28
DDG5	15/09/2020	1.0	17	0.5	9	1.5	26
DDG5	16/10/2020	0.9	16	0.4	8	1.3	24
DDG5	13/11/2020	1.4	23	0.8	14	2.2	37
DDG5	17/12/2020	1.5	30	0.6	13	2.1	43
DDG5	14/01/2021	0.8	14	0.5	7	1.3	21
DDG5	15/02/2021	1.3	24	0.3	7	1.6	31
DDG5	11/03/2021	1.3	18	0.4	6	1.7	24
DDG5	15/04/2021	0.1	3	0.2	4	0.3	7
DDG5	19/05/2021	2.4	49	0.7	13	3.1	62
DDG5	11/06/2021	2.5	34	0.7	9	3.2	43
DDG5	15/07/2021	1.4	29	0.5	10	1.9	39
DDG5	12/08/2021	0.7	11	0.8	13	1.5	24
DDG5	14/09/2021	1.6	28	0.7	12	2.3	40
DDG5	15/10/2021	1.7	31	0.5	10	2.2	41
DDG5	12/11/2021	1.0	16	0.6	10	1.6	26
DDG5	16/12/2021	0.7	14	0.1	2	0.8	16
DDG5	14/01/2022	0.5	8	0.6	10	1.1	18
DDG5	16/02/2022	0.6	11	0.4	8	1.0	19
DDG5	17/03/2022	0.5	9	0.3	5	0.8	14
DDG5	14/04/2022	0.4	6	0.4	8	0.8	14
DDG5	13/05/2022	0.4	7	0.3	5	0.7	12
DDG5	15/06/2022	0.6	11	0.3	7	0.9	18
DDG5	18/07/2022	1.3	25	0.8	16	2.1	41
DDG5	17/08/2022	1.3	23	0.7	13	2.0	36
DDG5	14/09/2022	1.6	26	0.6	11	2.2	37
DDG5	12/10/2022	1.4	23	1.4	24	2.8	47
DDG5	18/11/2022	0.8	17	0.9	19	1.7	36
DDG5	12/12/2022	1.5	21	1.3	18	2.8	39
DDG5	13/01/2023	0.5	9	0.6	12	1.1	21
DDG5	17/02/2023	0.6	12	0.5	11	1.1	23
DDG5	14/03/2023	0.4	6	0.2	3	0.6	9
DDG5	14/04/2023	0.5	10	0.4	6	0.9	16
DDG5	17/05/2023	0.4	8	0.4	8	0.8	16
DDG5	09/06/2023	0.2	3	<0.1	<2	0.2	3
DDG5	10/07/2023	0.6	11	0.6	6	0.9	17
DDG5	15/08/2023	0.5	11	0.3	6	0.8	17

TABLE 4
SUMMARY OF ANALYTICAL RESULTS
Dust Deposition Gauges

Fairfield City Council
Environmental Monitoring, FFCSRC, Wetherill Park

Sample ID	Sample Date	Ash Content	Ash Content	Combustible Matter	Combustible Matter	Total Insoluble Solids	Total Insoluble Matter
	Units	g/m².month	mg	g/m².month	mg	g/m².month	mg
	PQL	0.1	1	0.1	1	0.1	1
Adopted Criterion*						4.0 g/m².month	
DDG5	14/09/2023	0.4	10	0.2	5	1.0	17
DDG5	13/10/2023	0.6	10	0.1	2	0.7	12
DDG5	15/11/2023	0.6	10	0.1	2	0.7	17
DDG5	15/12/2023	-	-	-	-	2.8	50
DDG5	17/01/2024	0.5	10	0.5	9	1.0	19
DDG5	19/02/2024	0.4	7	0.2	5	0.6	12
DDG5	21/03/2024	0.2	4	0.3	5	0.5	9
DDG5	-	-	-	-	-	-	-
DDG5	24/05/2024	0.1	<2	0.1	3	0.2	4
DDG5	24/06/2024	0.2	3	<0.1	<2	0.2	3
DDG5	25/07/2024	<0.1	<2	<0.1	<2	<0.1	<2
DDG5	22/08/2024	0.1	<2	<0.1	<2	0.1	2
DDG5	20/09/2024	0.1	<2	0.2	4	0.3	5
DDG5	18/10/2024	<0.1	<2	<0.1	<2	<0.1	<2

* Source: *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA 2016)

Appendix C

Laboratory Certificates

CERTIFICATE OF ANALYSIS

Work Order	: **ES2331423**	Page	: 1 of 9
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Sydney
Contact	: IVAN WARD	Contact	: Josh Alexander
Address	: 124 PACIFIC HWY GREENWICH 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 117623088	Date Samples Received	: 14-Sep-2023 14:18
Order number	: 117623088/3	Date Analysis Commenced	: 16-Sep-2023
C-O-C number	: ----	Issue Date	: 21-Sep-2023 17:45
Sampler	: GBP		
Site	: Wetherill Park		
Quote number	: EN/002		
No. of samples received	: 8		
No. of samples analysed	: 6		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	GW1	GW3	GW4	SW1	SW2
			Sampling date / time	14-Sep-2023 00:00	14-Sep-2023 00:00	14-Sep-2023 00:00	14-Sep-2023 00:00	14-Sep-2023 00:00
Compound	CAS Number	LOR	Unit	ES2331423-001	ES2331423-002	ES2331423-003	ES2331423-004	ES2331423-005
				Result	Result	Result	Result	Result
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	**----**	**----**	**----**	**9**	**393**
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**361**	**1160**	**686**	**136**	**59**
Total Alkalinity as CaCO3	----	1	mg/L	**361**	**1160**	**686**	**136**	**59**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**64**	**159**	**809**	**56**	<1
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**181**	**1440**	**4350**	**260**	**41**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**95**	**30**	**25**	**33**	**17**
Magnesium	7439-95-4	1	mg/L	**33**	**106**	**370**	**24**	**6**
Sodium	7440-23-5	1	mg/L	**126**	**1280**	**2650**	**142**	**28**
Potassium	7440-09-7	1	mg/L	**14**	**2**	**20**	**5**	**4**
EG020F: Dissolved Metals by ICP-MS								
Manganese	7439-96-5	0.001	mg/L	**0.838**	**0.280**	**1.99**	**0.016**	**0.173**
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	**0.06**	**9.73**
EG020T: Total Metals by ICP-MS								
Manganese	7439-96-5	0.001	mg/L	**1.20**	**0.447**	**2.75**	**0.080**	**0.194**
Iron	7439-89-6	0.05	mg/L	**4.74**	**2.13**	**0.65**	**0.41**	**10.9**
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	**0.4**	**0.9**	**0.7**	**1.0**	**0.4**
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	**1.30**	**0.76**	**0.34**	**0.54**	**0.42**
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	**0.04**	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	**0.18**	<0.01	**0.06**	<0.01
Nitrate as NO3	14797-55-8	0.05	mg/L	<0.05	**0.80**	<0.05	**0.26**	<0.05
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	**0.18**	<0.01	**0.10**	<0.01
EN055: Ionic Balance								

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	SW1	SW2
				Sampling date / time	14-Sep-2023 00:00	14-Sep-2023 00:00	14-Sep-2023 00:00	14-Sep-2023 00:00	14-Sep-2023 00:00
Compound	CAS Number	LOR	Unit		ES2331423-001	ES2331423-002	ES2331423-003	ES2331423-004	ES2331423-005
					Result	Result	Result	Result	Result
EN055: Ionic Balance - Continued									
ø Total Anions	----	0.01	meq/L		13.6	67.1	153	11.2	2.34
ø Total Cations	----	0.01	meq/L		13.3	65.9	147	9.93	2.66
ø Ionic Balance	----	0.01	%		1.32	0.87	1.92	6.10	----
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L		19	50	27	14	167
EP020: Oil and Grease (O&G)									
Oil & Grease	----	5	mg/L		----	----	----	<5	130
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	5	µg/L		<5	<5	<5	<5	<5
1.2-Dichloropropane	78-87-5	5	µg/L		<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L		<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L		<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L		<5	<5	<5	<5	<5
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	50	µg/L		<50	<50	<50	<50	<50
Chloromethane	74-87-3	50	µg/L		<50	<50	<50	<50	<50
Vinyl chloride	75-01-4	50	µg/L		<50	<50	<50	<50	<50
Bromomethane	74-83-9	50	µg/L		<50	<50	<50	<50	<50
Chloroethane	75-00-3	50	µg/L		<50	<50	<50	<50	<50
Trichlorofluoromethane	75-69-4	50	µg/L		<50	<50	<50	<50	<50
1.1-Dichloroethene	75-35-4	5	µg/L		<5	<5	<5	<5	<5
Iodomethane	74-88-4	5	µg/L		<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	156-60-5	5	µg/L		<5	<5	<5	<5	<5
1.1-Dichloroethane	75-34-3	5	µg/L		<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	156-59-2	5	µg/L		<5	<5	<5	<5	<5
1.1.1-Trichloroethane	71-55-6	5	µg/L		<5	<5	<5	<5	<5
1.1-Dichloropropylene	563-58-6	5	µg/L		<5	<5	<5	<5	<5
Carbon Tetrachloride	56-23-5	5	µg/L		<5	<5	<5	<5	<5
1.2-Dichloroethane	107-06-2	5	µg/L		<5	<5	<5	<5	<5
Trichloroethene	79-01-6	5	µg/L		<5	<5	<5	<5	<5
Dibromomethane	74-95-3	5	µg/L		<5	<5	<5	<5	<5
1.1.2-Trichloroethane	79-00-5	5	µg/L		<5	<5	<5	<5	<5
1.3-Dichloropropane	142-28-9	5	µg/L		<5	<5	<5	<5	<5
Tetrachloroethene	127-18-4	5	µg/L		<5	<5	<5	<5	<5

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	SW1	SW2
				Sampling date / time	14-Sep-2023 00:00	14-Sep-2023 00:00	14-Sep-2023 00:00	14-Sep-2023 00:00	14-Sep-2023 00:00
Compound	CAS Number	LOR	Unit		ES2331423-001	ES2331423-002	ES2331423-003	ES2331423-004	ES2331423-005
					Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued									
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L		<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L		<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L		<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L		<5	<5	<5	<5	<5
1.2.3-Trichloropropane	96-18-4	5	µg/L		<5	<5	<5	<5	<5
Pentachloroethane	76-01-7	5	µg/L		<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	<5	<5	<5	<5
Hexachlorobutadiene	87-68-3	5	µg/L		<5	<5	<5	<5	<5
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		<5	<5	<5	<5	<5
Bromobenzene	108-86-1	5	µg/L		<5	<5	<5	<5	<5
2-Chlorotoluene	95-49-8	5	µg/L		<5	<5	<5	<5	<5
4-Chlorotoluene	106-43-4	5	µg/L		<5	<5	<5	<5	<5
1.3-Dichlorobenzene	541-73-1	5	µg/L		<5	<5	<5	<5	<5
1.4-Dichlorobenzene	106-46-7	5	µg/L		<5	<5	<5	<5	<5
1.2-Dichlorobenzene	95-50-1	5	µg/L		<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	120-82-1	5	µg/L		<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		<5	<5	<5	<5	<5
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		<5	<5	<5	<5	<5
Bromodichloromethane	75-27-4	5	µg/L		<5	<5	<5	<5	<5
Dibromochloromethane	124-48-1	5	µg/L		<5	<5	<5	<5	<5
Bromoform	75-25-2	5	µg/L		<5	<5	<5	<5	<5
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		**110**	**118**	**113**	**112**	**119**
Toluene-D8	2037-26-5	5	%		**113**	**117**	**112**	**112**	**124**
4-Bromofluorobenzene	460-00-4	5	%		**115**	**116**	**115**	**113**	**107**

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	QC100	----	----	----	----
				Sampling date / time	14-Sep-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2331423-006	--------	--------	--------	--------
					Result	----	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L		**314**	----	----	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**62**	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L		**62**	----	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		<1	----	----	----	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**40**	----	----	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**17**	----	----	----	----
Magnesium	7439-95-4	1	mg/L		**6**	----	----	----	----
Sodium	7440-23-5	1	mg/L		**26**	----	----	----	----
Potassium	7440-09-7	1	mg/L		**4**	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		**0.184**	----	----	----	----
Iron	7439-89-6	0.05	mg/L		**9.68**	----	----	----	----
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		**0.198**	----	----	----	----
Iron	7439-89-6	0.05	mg/L		**11.0**	----	----	----	----
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L		**0.4**	----	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**0.42**	----	----	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	----	----	----	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		<0.01	----	----	----	----
Nitrate as NO3	14797-55-8	0.05	mg/L		<0.05	----	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		<0.01	----	----	----	----
EN055: Ionic Balance									

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	QC100	----	----	----	----
				Sampling date / time	14-Sep-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2331423-006	--------	--------	--------	--------
					Result	----	----	----	----
EN055: Ionic Balance - Continued									
ø Total Anions	----	0.01	meq/L		**2.37**	----	----	----	----
ø Total Cations	----	0.01	meq/L		**2.58**	----	----	----	----
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L		**174**	----	----	----	----
EP020: Oil and Grease (O&G)									
Oil & Grease	----	5	mg/L		**104**	----	----	----	----
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	5	µg/L		<5	----	----	----	----
1.2-Dichloropropane	78-87-5	5	µg/L		<5	----	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L		<5	----	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L		<5	----	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L		<5	----	----	----	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	50	µg/L		<50	----	----	----	----
Chloromethane	74-87-3	50	µg/L		<50	----	----	----	----
Vinyl chloride	75-01-4	50	µg/L		<50	----	----	----	----
Bromomethane	74-83-9	50	µg/L		<50	----	----	----	----
Chloroethane	75-00-3	50	µg/L		<50	----	----	----	----
Trichlorofluoromethane	75-69-4	50	µg/L		<50	----	----	----	----
1.1-Dichloroethene	75-35-4	5	µg/L		<5	----	----	----	----
Iodomethane	74-88-4	5	µg/L		<5	----	----	----	----
trans-1.2-Dichloroethene	156-60-5	5	µg/L		<5	----	----	----	----
1.1-Dichloroethane	75-34-3	5	µg/L		<5	----	----	----	----
cis-1.2-Dichloroethene	156-59-2	5	µg/L		<5	----	----	----	----
1.1.1-Trichloroethane	71-55-6	5	µg/L		<5	----	----	----	----
1.1-Dichloropropylene	563-58-6	5	µg/L		<5	----	----	----	----
Carbon Tetrachloride	56-23-5	5	µg/L		<5	----	----	----	----
1.2-Dichloroethane	107-06-2	5	µg/L		<5	----	----	----	----
Trichloroethene	79-01-6	5	µg/L		<5	----	----	----	----
Dibromomethane	74-95-3	5	µg/L		<5	----	----	----	----
1.1.2-Trichloroethane	79-00-5	5	µg/L		<5	----	----	----	----
1.3-Dichloropropane	142-28-9	5	µg/L		<5	----	----	----	----
Tetrachloroethene	127-18-4	5	µg/L		<5	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L		<5	----	----	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	QC100	----	----	----	----
				Sampling date / time	14-Sep-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2331423-006	--------	--------	--------	--------
					Result	----	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L		<5	----	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L		<5	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L		<5	----	----	----	----
1.2.3-Trichloropropane	96-18-4	5	µg/L		<5	----	----	----	----
Pentachloroethane	76-01-7	5	µg/L		<5	----	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	----	----	----	----
Hexachlorobutadiene	87-68-3	5	µg/L		<5	----	----	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		<5	----	----	----	----
Bromobenzene	108-86-1	5	µg/L		<5	----	----	----	----
2-Chlorotoluene	95-49-8	5	µg/L		<5	----	----	----	----
4-Chlorotoluene	106-43-4	5	µg/L		<5	----	----	----	----
1.3-Dichlorobenzene	541-73-1	5	µg/L		<5	----	----	----	----
1.4-Dichlorobenzene	106-46-7	5	µg/L		<5	----	----	----	----
1.2-Dichlorobenzene	95-50-1	5	µg/L		<5	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	5	µg/L		<5	----	----	----	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		<5	----	----	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		<5	----	----	----	----
Bromodichloromethane	75-27-4	5	µg/L		<5	----	----	----	----
Dibromochloromethane	124-48-1	5	µg/L		<5	----	----	----	----
Bromoform	75-25-2	5	µg/L		<5	----	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		**120**	----	----	----	----
Toluene-D8	2037-26-5	5	%		**128**	----	----	----	----
4-Bromofluorobenzene	460-00-4	5	%		**109**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **GROUNDWATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124

CERTIFICATE OF ANALYSIS

Work Order	: **EN2310462**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 16-Oct-2023 17:00
Order number	: 117623088	Date Analysis Commenced	: 25-Oct-2023
C-O-C number	: ----	Issue Date	: 26-Oct-2023 15:31
Sampler	: GBP		
Site	: Wetherill Park		
Quote number	: EN/002		
No. of samples received	: 5		
No. of samples analysed	: 5		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Zoran Grozdanovski	Team Leader - Chemistry	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- No copper sulfate correction was applied to samples 002 and 003.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: **DEPOSITIONAL DUST** (Matrix: **AIR**)

Compound	CAS Number	LOR	Unit	Sample ID	DDG1 14/09/23 - 13/10/23	DDG2 14/09/23 - 13/10/23	DDG3 14/09/23 - 13/10/23	DDG4 14/09/23 - 13/10/23	DDG5 14/09/23 - 13/10/23
				Sampling date / time	13-Oct-2023 00:00	13-Oct-2023 00:00	13-Oct-2023 00:00	13-Oct-2023 00:00	13-Oct-2023 00:00
					EN2310462-001	EN2310462-002	EN2310462-003	EN2310462-004	EN2310462-005
					Result	Result	Result	Result	Result
EA120: Ash Content									
Ash Content	----	0.1	g/m².month		**2.4**	**0.9**	**1.3**	**1.9**	**0.6**
Ash Content (mg)	----	2	mg		**41**	**16**	**22**	**33**	**10**
EA125: Combustible Matter									
Combustible Matter	----	0.1	g/m².month		**0.8**	**0.6**	**0.3**	**0.7**	**0.1**
Combustible Matter (mg)	----	2	mg		**14**	**9**	**6**	**11**	**2**
EA141: Total Insoluble Matter									
Total Insoluble Matter	----	0.1	g/m².month		**3.2**	**1.5**	**1.6**	**2.6**	**0.7**
Total Insoluble Matter (mg)	----	2	mg		**55**	**25**	**28**	**44**	**12**

CERTIFICATE OF ANALYSIS

Work Order	: **EN2311576**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: 117623088/PS134467	Date Samples Received	: 16-Nov-2023 17:00
Order number	: 117623088	Date Analysis Commenced	: 21-Nov-2023
C-O-C number	: ----	Issue Date	: 23-Nov-2023 11:15
Sampler	: Angus Blakemore		
Site	: Wetherill Park		
Quote number	: EN/000		
No. of samples received	: 5		
No. of samples analysed	: 5		

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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Thomas Regan	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- Sample exposure period is 33 days which is outside the typical exposure period of 30 +/- 2 days as per AS3580.10.1.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: **DEPOSITIONAL DUST** (Matrix: **AIR**)			*Sample ID*	**DDG1 13/10/23 - 15/11/23**	**DDG2 13/10/23 - 15/11/23**	**DDG3 13/10/23 - 15/11/23**	**DDG4 13/10/23 - 15/11/23**	**DDG5 13/10/23 - 15/11/23**
			Sampling date / time	15-Nov-2023 00:00	15-Nov-2023 00:00	15-Nov-2023 00:00	15-Nov-2023 00:00	15-Nov-2023 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**EN2311576-001**	**EN2311576-002**	**EN2311576-003**	**EN2311576-004**	**EN2311576-005**
				Result	Result	Result	Result	Result
EA139: Total Soluble Matter								
Total Soluble Matter	----	0.1	g/m².month	**1.3**	**0.8**	**1.1**	**1.4**	**0.7**
Total Soluble Matter (mg)	----	2	mg	**25**	**16**	**21**	**28**	**13**
EA141: Total Insoluble Matter								
Total Insoluble Matter	----	0.1	g/m².month	**2.2**	**2.5**	**1.2**	**1.6**	**0.9**
Total Insoluble Matter (mg)	----	2	mg	**42**	**48**	**24**	**32**	**17**
EA142: Total Solids								
Total Solids	----	0.1	g/m².month	**3.5**	**3.3**	**2.3**	**3.0**	**1.6**
Total Solids (mg)	----	2	mg	**67**	**64**	**45**	**60**	**30**

CERTIFICATE OF ANALYSIS

Work Order	: **ES2343680**	Page	: 1 of 11
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Sydney
Contact	: IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 117623088 (PS134467)	Date Samples Received	: 15-Dec-2023 14:30
Order number	: 117623088	Date Analysis Commenced	: 16-Dec-2023
C-O-C number	: ----	Issue Date	: 22-Dec-2023 11:04
Sampler	: GRACE BENDALL-PEASE		
Site	: WETHERILL PARK		
Quote number	: EN/000		
No. of samples received	: 7		
No. of samples analysed	: 6		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EP074: Result for ES2343680-03 has been confirmed by re-analysis.
- EN055: Ionic Balance out of acceptable limits for sample ES2343680-#004 due to analytes not quantified in this report.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	QC100	----
				Sampling date / time	15-Dec-2023 00:00	15-Dec-2023 00:00	15-Dec-2023 00:00	15-Dec-2023 00:00	----
Compound	CAS Number	LOR	Unit		ES2343680-001	ES2343680-002	ES2343680-003	ES2343680-006	--------
					Result	Result	Result	Result	----
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L		----	----	----	37	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		508	653	768	42	----
Total Alkalinity as CaCO3	----	1	mg/L		508	653	768	42	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		47	184	404	15	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		164	801	1960	22	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		108	21	13	10	----
Magnesium	7439-95-4	1	mg/L		39	55	220	3	----
Sodium	7440-23-5	1	mg/L		116	714	1770	18	----
Potassium	7440-09-7	1	mg/L		14	3	16	2	----
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		0.409	0.165	2.44	0.105	----
Iron	7439-89-6	0.05	mg/L		0.10	<0.05	<0.05	1.18	----
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		0.666	0.600	3.78	0.111	----
Iron	7439-89-6	0.05	mg/L		9.15	81.0	1.15	2.03	----
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L		0.4	0.6	0.6	0.2	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		1.36	0.16	0.18	<0.01	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		0.01	<0.01	0.03	<0.01	----
EK058G: Nitrate as N by Discrete Analyser									

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	QC100	----
				Sampling date / time	15-Dec-2023 00:00	15-Dec-2023 00:00	15-Dec-2023 00:00	15-Dec-2023 00:00	----
Compound	CAS Number	LOR	Unit		ES2343680-001	ES2343680-002	ES2343680-003	ES2343680-006	--------
					Result	Result	Result	Result	----
EK058G: Nitrate as N by Discrete Analyser - Continued									
Nitrate as N	14797-55-8	0.01	mg/L		**0.06**	<0.01	**0.45**	<0.01	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.07**	<0.01	**0.48**	<0.01	----
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		**15.8**	**39.5**	**79.0**	**1.77**	----
ø Total Cations	----	0.01	meq/L		**14.0**	**36.7**	**96.2**	**1.58**	----
ø Ionic Balance	----	0.01	%		**5.89**	**3.63**	**9.76**	----	----
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L		**29**	**24**	**15**	**25**	----
EP020: Oil and Grease (O&G)									
Oil & Grease	----	5	mg/L		----	----	----	**7**	----
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	5	µg/L		<5	<5	<5	<5	----
1.2-Dichloropropane	78-87-5	5	µg/L		<5	<5	<5	<5	----
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L		<5	<5	<5	<5	----
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L		<5	<5	<5	<5	----
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L		<5	<5	<5	<5	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	50	µg/L		<50	<50	<50	<50	----
Chloromethane	74-87-3	50	µg/L		<50	<50	<50	<50	----
Vinyl chloride	75-01-4	50	µg/L		<50	<50	<50	<50	----
Bromomethane	74-83-9	50	µg/L		<50	<50	<50	<50	----
Chloroethane	75-00-3	50	µg/L		<50	<50	<50	<50	----
Trichlorofluoromethane	75-69-4	50	µg/L		<50	<50	<50	<50	----
1.1-Dichloroethene	75-35-4	5	µg/L		<5	<5	<5	<5	----
Iodomethane	74-88-4	5	µg/L		<5	<5	<5	<5	----
trans-1.2-Dichloroethene	156-60-5	5	µg/L		<5	<5	<5	<5	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	QC100	----
				Sampling date / time	15-Dec-2023 00:00	15-Dec-2023 00:00	15-Dec-2023 00:00	15-Dec-2023 00:00	----
Compound	CAS Number	LOR	Unit		ES2343680-001	ES2343680-002	ES2343680-003	ES2343680-006	--------
					Result	Result	Result	Result	----
EP074E: Halogenated Aliphatic Compounds - Continued									
1.1-Dichloroethane	75-34-3	5	µg/L		<5	<5	<5	<5	----
cis-1.2-Dichloroethene	156-59-2	5	µg/L		<5	<5	<5	<5	----
1.1.1-Trichloroethane	71-55-6	5	µg/L		<5	<5	<5	<5	----
1.1-Dichloropropylene	563-58-6	5	µg/L		<5	<5	<5	<5	----
Carbon Tetrachloride	56-23-5	5	µg/L		<5	<5	<5	<5	----
1.2-Dichloroethane	107-06-2	5	µg/L		<5	<5	<5	<5	----
Trichloroethene	79-01-6	5	µg/L		<5	<5	<5	<5	----
Dibromomethane	74-95-3	5	µg/L		<5	<5	<5	<5	----
1.1.2-Trichloroethane	79-00-5	5	µg/L		<5	<5	<5	<5	----
1.3-Dichloropropane	142-28-9	5	µg/L		<5	<5	<5	<5	----
Tetrachloroethene	127-18-4	5	µg/L		<5	<5	<5	<5	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L		<5	<5	<5	<5	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L		<5	<5	<5	<5	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L		<5	<5	<5	<5	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L		<5	<5	<5	<5	----
1.2.3-Trichloropropane	96-18-4	5	µg/L		<5	<5	<5	<5	----
Pentachloroethane	76-01-7	5	µg/L		<5	<5	<5	<5	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	<5	<5	<5	----
Hexachlorobutadiene	87-68-3	5	µg/L		<5	<5	<5	<5	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		<5	<5	<5	<5	----
Bromobenzene	108-86-1	5	µg/L		<5	<5	<5	<5	----
2-Chlorotoluene	95-49-8	5	µg/L		<5	<5	<5	<5	----
4-Chlorotoluene	106-43-4	5	µg/L		<5	<5	<5	<5	----
1.3-Dichlorobenzene	541-73-1	5	µg/L		<5	<5	<5	<5	----
1.4-Dichlorobenzene	106-46-7	5	µg/L		<5	<5	<5	<5	----
1.2-Dichlorobenzene	95-50-1	5	µg/L		<5	<5	<5	<5	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	QC100	----
				Sampling date / time	15-Dec-2023 00:00	15-Dec-2023 00:00	15-Dec-2023 00:00	15-Dec-2023 00:00	----
Compound	CAS Number	LOR	Unit		ES2343680-001	ES2343680-002	ES2343680-003	ES2343680-006	--------
					Result	Result	Result	Result	----
EP074F: Halogenated Aromatic Compounds - Continued									
1.2.4-Trichlorobenzene	120-82-1	5	µg/L		<5	<5	<5	<5	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		<5	<5	<5	<5	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		<5	<5	<5	<5	----
Bromodichloromethane	75-27-4	5	µg/L		<5	<5	<5	<5	----
Dibromochloromethane	124-48-1	5	µg/L		<5	<5	<5	<5	----
Bromoform	75-25-2	5	µg/L		<5	<5	<5	<5	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		**100.0**	**103**	**97.3**	**78.6**	----
Toluene-D8	2037-26-5	5	%		**98.1**	**107**	**96.8**	**85.8**	----
4-Bromofluorobenzene	460-00-4	5	%		**97.8**	**102**	**88.8**	**81.4**	----

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	SW1	SW2	----	----	----
				Sampling date / time	15-Dec-2023 00:00	15-Dec-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2343680-004	ES2343680-005	--------	--------	--------
					Result	Result	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L		**6**	**36**	----	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**135**	**44**	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L		**135**	**44**	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**31**	**11**	----	----	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**109**	**22**	----	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**26**	**9**	----	----	----
Magnesium	7439-95-4	1	mg/L		**15**	**3**	----	----	----
Sodium	7440-23-5	1	mg/L		**66**	**17**	----	----	----
Potassium	7440-09-7	1	mg/L		**5**	**3**	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		**0.003**	**0.105**	----	----	----
Iron	7439-89-6	0.05	mg/L		**0.16**	**1.14**	----	----	----
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		**0.103**	**0.115**	----	----	----
Iron	7439-89-6	0.05	mg/L		**0.49**	**2.01**	----	----	----
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L		<0.1	**0.6**	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**2.13**	**0.02**	----	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		**0.06**	<0.01	----	----	----
EK058G: Nitrate as N by Discrete Analyser									

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	SW1	SW2	----	----	----
			Sampling date / time	15-Dec-2023 00:00	15-Dec-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2343680-004	ES2343680-005	--------	--------	--------
				Result	Result	----	----	----
EK058G: Nitrate as N by Discrete Analyser - Continued								
Nitrate as N	14797-55-8	0.01	mg/L	**0.11**	<0.01	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**0.17**	<0.01	----	----	----
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	**6.42**	**1.73**	----	----	----
ø Total Cations	----	0.01	meq/L	**5.68**	----	----	----	----
ø Total Cations	----	0.01	meq/L	----	**1.51**	----	----	----
ø Ionic Balance	----	0.01	%	**6.09**	----	----	----	----
EP005: Total Organic Carbon (TOC)								
Total Organic Carbon	----	1	mg/L	**12**	**25**	----	----	----
EP020: Oil and Grease (O&G)								
Oil & Grease	----	5	mg/L	<5	**6**	----	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	----	----	----
1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	----	----	----
Chloromethane	74-87-3	50	µg/L	<50	<50	----	----	----
Vinyl chloride	75-01-4	50	µg/L	<50	<50	----	----	----
Bromomethane	74-83-9	50	µg/L	<50	<50	----	----	----
Chloroethane	75-00-3	50	µg/L	<50	<50	----	----	----
Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	----	----	----
1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	----	----	----
Iodomethane	74-88-4	5	µg/L	<5	<5	----	----	----

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	SW1	SW2	----	----	----
				Sampling date / time	15-Dec-2023 00:00	15-Dec-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2343680-004	ES2343680-005	--------	--------	--------
					Result	Result	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
trans-1.2-Dichloroethene	156-60-5	5	µg/L		<5	<5	----	----	----
1.1-Dichloroethane	75-34-3	5	µg/L		<5	<5	----	----	----
cis-1.2-Dichloroethene	156-59-2	5	µg/L		<5	<5	----	----	----
1.1.1-Trichloroethane	71-55-6	5	µg/L		<5	<5	----	----	----
1.1-Dichloropropylene	563-58-6	5	µg/L		<5	<5	----	----	----
Carbon Tetrachloride	56-23-5	5	µg/L		<5	<5	----	----	----
1.2-Dichloroethane	107-06-2	5	µg/L		<5	<5	----	----	----
Trichloroethene	79-01-6	5	µg/L		<5	<5	----	----	----
Dibromomethane	74-95-3	5	µg/L		<5	<5	----	----	----
1.1.2-Trichloroethane	79-00-5	5	µg/L		<5	<5	----	----	----
1.3-Dichloropropane	142-28-9	5	µg/L		<5	<5	----	----	----
Tetrachloroethene	127-18-4	5	µg/L		<5	<5	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L		<5	<5	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L		<5	<5	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L		<5	<5	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L		<5	<5	----	----	----
1.2.3-Trichloropropane	96-18-4	5	µg/L		<5	<5	----	----	----
Pentachloroethane	76-01-7	5	µg/L		<5	<5	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	<5	----	----	----
Hexachlorobutadiene	87-68-3	5	µg/L		<5	<5	----	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		<5	<5	----	----	----
Bromobenzene	108-86-1	5	µg/L		<5	<5	----	----	----
2-Chlorotoluene	95-49-8	5	µg/L		<5	<5	----	----	----
4-Chlorotoluene	106-43-4	5	µg/L		<5	<5	----	----	----
1.3-Dichlorobenzene	541-73-1	5	µg/L		<5	<5	----	----	----
1.4-Dichlorobenzene	106-46-7	5	µg/L		<5	<5	----	----	----

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	SW1	SW2	----	----	----
				Sampling date / time	15-Dec-2023 00:00	15-Dec-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2343680-004	ES2343680-005	--------	--------	--------
					Result	Result	----	----	----
EP074F: Halogenated Aromatic Compounds - Continued									
1.2-Dichlorobenzene	95-50-1	5	µg/L		<5	<5	----	----	----
1.2.4-Trichlorobenzene	120-82-1	5	µg/L		<5	<5	----	----	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		<5	<5	----	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		<5	<5	----	----	----
Bromodichloromethane	75-27-4	5	µg/L		<5	<5	----	----	----
Dibromochloromethane	124-48-1	5	µg/L		<5	<5	----	----	----
Bromoform	75-25-2	5	µg/L		<5	<5	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		**79.6**	**107**	----	----	----
Toluene-D8	2037-26-5	5	%		**99.7**	**114**	----	----	----
4-Bromofluorobenzene	460-00-4	5	%		**97.8**	**111**	----	----	----

Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124

CERTIFICATE OF ANALYSIS

Work Order	: **EN2312650**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 18-Dec-2023 17:00
Order number	: 117623088	Date Analysis Commenced	: 22-Dec-2023
C-O-C number	: ----	Issue Date	: 04-Jan-2024 16:32
Sampler	: IVAN WARD		
Site	: Wetherill Park		
Quote number	: EN/000		
No. of samples received	: 5		
No. of samples analysed	: 5		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Thomas Regan	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: DEPOSITIONAL DUST (Matrix: AIR)			Sample ID	DDG1 15/11/23 - 15/12/23	DDG2 15/11/23 - 15/12/23	DDG3 15/11/23 - 15/12/23	DDG4 15/11/23 - 15/12/23	DDG5 15/11/23 - 15/12/23
			Sampling date / time	15-Dec-2023 00:00	15-Dec-2023 00:00	15-Dec-2023 00:00	15-Dec-2023 00:00	15-Dec-2023 00:00
Compound	CAS Number	LOR	Unit	EN2312650-001	EN2312650-002	EN2312650-003	EN2312650-004	EN2312650-005
				Result	Result	Result	Result	Result
EA139: Total Soluble Matter								
Total Soluble Matter	----	0.1	g/m².month	**0.1**	**0.5**	<0.1	**1.8**	<0.1
Total Soluble Matter (mg)	----	2	mg	<2	**9**	<2	**32**	<2
EA141: Total Insoluble Matter								
Total Insoluble Matter	----	0.1	g/m².month	**0.7**	**4.1**	**3.3**	**3.3**	**2.8**
Total Insoluble Matter (mg)	----	2	mg	**12**	**72**	**58**	**59**	**50**
EA142: Total Solids								
Total Solids	----	0.1	g/m².month	**0.8**	**4.6**	**3.3**	**5.1**	**2.8**
Total Solids (mg)	----	2	mg	**13**	**81**	**58**	**91**	**50**

CERTIFICATE OF ANALYSIS

Work Order	: **EN2400473**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 17-Jan-2024 17:00
Order number	: TBA	Date Analysis Commenced	: 25-Jan-2024
C-O-C number	: ----	Issue Date	: 31-Jan-2024 11:50
Sampler	: Grace Bendall-Pease		
Site	:		
Quote number	: EN/000		
No. of samples received	: 5		
No. of samples analysed	: 5		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

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This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Shane Merrell	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in g/m².mth as sampling data was provided by the client.
- Sample exposure period is outside the typical exposure period of 30 +/- 2 days as per AS3580.10.1/AS3580.10.2
- The dust gauges for all samples were full when received by the laboratory. They may have overflowed in the field. Results for these gauges are thus reported on an 'as received' basis.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: DEPOSITIONAL DUST (Matrix: AIR)			Sample ID	DDG1 15/12/23 - 17/01/24	DDG2 15/12/23 - 17/01/24	DDG3 15/12/23 - 17/01/24	DDG4 15/12/23 - 17/01/24	DDG5 15/12/23 - 17/01/24
			Sampling date / time	17-Jan-2024 00:00	17-Jan-2024 00:00	17-Jan-2024 00:00	17-Jan-2024 00:00	17-Jan-2024 00:00
Compound	CAS Number	LOR	Unit	EN2400473-001	EN2400473-002	EN2400473-003	EN2400473-004	EN2400473-005
				Result	Result	Result	Result	Result
EA120: Ash Content								
Ash Content	----	0.1	g/m².month	0.9	0.1	0.9	1.4	0.5
Ash Content (mg)	----	2	mg	18	<2	17	27	10
EA125: Combustible Matter								
Combustible Matter	----	0.1	g/m².month	0.6	1.0	0.5	0.8	0.5
Combustible Matter (mg)	----	2	mg	11	21	10	15	9
EA141: Total Insoluble Matter								
Total Insoluble Matter	----	0.1	g/m².month	1.5	1.1	1.4	2.2	1.0
Total Insoluble Matter (mg)	----	2	mg	29	22	27	42	19

CERTIFICATE OF ANALYSIS

Work Order	: **EN2401464**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 19-Feb-2024 17:00
Order number	: 117623088	Date Analysis Commenced	: 23-Feb-2024
C-O-C number	: ----	Issue Date	: 01-Mar-2024 13:48
Sampler	: Grace Bendall-Pease		
Site	:		
Quote number	: EN/000		
No. of samples received	: 5		
No. of samples analysed	: 5		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Zoran Grozdanovski	Team Leader - Chemistry	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Dust analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in deposition units e.g., g/m².mth where the sampling procedure is not NATA accredited. ALS Mudgee laboratory is NATA accredited for dust sampling, therefore ALS Mudgee reported deposition units are accredited.
- Sample exposure period is outside the typical exposure period of 30 +/- 2 days as per AS3580.10.1/AS3580.10.2
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: DEPOSITIONAL DUST (Matrix: AIR)				Sample ID	DDG1 17/01/24 - 19/02/24	DDG2 17/01/24 - 19/02/24	DDG3 17/01/24 - 19/02/24	DDG4 17/01/24 - 19/02/24	DDG5 17/01/24 - 19/02/24
				Sampling date / time	19-Feb-2024 00:00	19-Feb-2024 00:00	19-Feb-2024 00:00	19-Feb-2024 00:00	19-Feb-2024 00:00
Compound	CAS Number	LOR	Unit		EN2401464-001	EN2401464-002	EN2401464-003	EN2401464-004	EN2401464-005
					Result	Result	Result	Result	Result
EA120: Ash Content									
Ash Content	----	0.1	g/m².month		1.4	0.7	1.0	0.9	0.4
Ash Content (mg)	----	2	mg		27	14	19	18	7
EA125: Combustible Matter									
Combustible Matter	----	0.1	g/m².month		0.6	0.4	0.5	0.8	0.2
Combustible Matter (mg)	----	2	mg		11	8	11	16	5
EA141: Total Insoluble Matter									
Total Insoluble Matter	----	0.1	g/m².month		2.0	1.1	1.5	1.7	0.6
Total Insoluble Matter (mg)	----	2	mg		38	22	30	34	12

CERTIFICATE OF ANALYSIS

Work Order	: **ES2409457**	Page	: 1 of 11
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Sydney
Contact	: IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 117623088	Date Samples Received	: 22-Mar-2024 18:00
Order number	: 117623088	Date Analysis Commenced	: 22-Mar-2024
C-O-C number	: ----	Issue Date	: 28-Mar-2024 21:19
Sampler	: Grace Bendall-Pease		
Site	: Wetherill Park		
Quote number	: EN/000		
No. of samples received	: 7		
No. of samples analysed	: 7		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

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This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

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LOR = Limit of reporting
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~ = Indicates an estimated value.

- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EK040: Poor spike recovery for Fluoride due to matrix interferences
- EG020/ED093: Filtered results for samples ES2409457-#002, #006 and #007 have been confirmed by reanalysis.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	QC100	QC100A
				Sampling date / time	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00
Compound	CAS Number	LOR	Unit		ES2409457-001	ES2409457-002	ES2409457-003	ES2409457-006	ES2409457-007
					Result	Result	Result	Result	Result
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		355	698	954	569	714
Total Alkalinity as CaCO3	----	1	mg/L		355	698	954	569	714
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		50	157	306	144	165
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		189	812	1560	827	870
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		105	21	10	22	20
Magnesium	7439-95-4	1	mg/L		28	43	118	47	48
Sodium	7440-23-5	1	mg/L		116	689	1380	716	790
Potassium	7440-09-7	1	mg/L		12	3	13	3	3
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		0.344	0.171	0.933	0.194	0.084
Iron	7439-89-6	0.05	mg/L		0.06	2.75	<0.05	2.73	0.91
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		1.03	0.320	0.986	0.323	0.318
Iron	7439-89-6	0.05	mg/L		1.41	9.01	0.69	10.3	8.54
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L		0.4	0.8	0.6	0.8	0.8
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		0.30	1.04	0.37	1.05	1.05
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		0.04	0.04	0.06	0.06	0.06
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	QC100	QC100A
				Sampling date / time	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00
Compound	CAS Number	LOR	Unit		ES2409457-001	ES2409457-002	ES2409457-003	ES2409457-006	ES2409457-007
					Result	Result	Result	Result	Result
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser - Continued									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.04**	**0.04**	**0.06**	**0.06**	**0.06**
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		**13.5**	**40.1**	**69.4**	**37.7**	**42.2**
ø Total Cations	----	0.01	meq/L		**12.9**	**34.6**	**70.6**	**36.2**	**39.4**
ø Ionic Balance	----	0.01	%		**2.16**	**7.34**	**0.81**	**2.04**	**3.50**
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L		**17**	**31**	**24**	**32**	**31**
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	5	µg/L		<5	<5	<5	<5	<5
1.2-Dichloropropane	78-87-5	5	µg/L		<5	<5	<5	<5	<5
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L		<5	<5	<5	<5	<5
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L		<5	<5	<5	<5	<5
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L		<5	<5	<5	<5	<5
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	50	µg/L		<50	<50	<50	<50	<50
Chloromethane	74-87-3	50	µg/L		<50	<50	<50	<50	<50
Vinyl chloride	75-01-4	50	µg/L		<50	<50	<50	<50	<50
Bromomethane	74-83-9	50	µg/L		<50	<50	<50	<50	<50
Chloroethane	75-00-3	50	µg/L		<50	<50	<50	<50	<50
Trichlorofluoromethane	75-69-4	50	µg/L		<50	<50	<50	<50	<50
1.1-Dichloroethene	75-35-4	5	µg/L		<5	<5	<5	<5	<5
Iodomethane	74-88-4	5	µg/L		<5	<5	<5	<5	<5
trans-1.2-Dichloroethene	156-60-5	5	µg/L		<5	<5	<5	<5	<5
1.1-Dichloroethane	75-34-3	5	µg/L		<5	<5	<5	<5	<5
cis-1.2-Dichloroethene	156-59-2	5	µg/L		<5	<5	<5	<5	<5
1.1.1-Trichloroethane	71-55-6	5	µg/L		<5	<5	<5	<5	<5
1.1-Dichloropropylene	563-58-6	5	µg/L		<5	<5	<5	<5	<5

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	QC100	QC100A
				Sampling date / time	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00
Compound	CAS Number	LOR	Unit		ES2409457-001	ES2409457-002	ES2409457-003	ES2409457-006	ES2409457-007
					Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued									
Carbon Tetrachloride	56-23-5	5	µg/L		<5	<5	<5	<5	<5
1.2-Dichloroethane	107-06-2	5	µg/L		<5	<5	<5	<5	<5
Trichloroethene	79-01-6	5	µg/L		<5	<5	<5	<5	<5
Dibromomethane	74-95-3	5	µg/L		<5	<5	<5	<5	<5
1.1.2-Trichloroethane	79-00-5	5	µg/L		<5	<5	<5	<5	<5
1.3-Dichloropropane	142-28-9	5	µg/L		<5	<5	<5	<5	<5
Tetrachloroethene	127-18-4	5	µg/L		<5	<5	<5	<5	<5
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L		<5	<5	<5	<5	<5
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L		<5	<5	<5	<5	<5
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L		<5	<5	<5	<5	<5
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L		<5	<5	<5	<5	<5
1.2.3-Trichloropropane	96-18-4	5	µg/L		<5	<5	<5	<5	<5
Pentachloroethane	76-01-7	5	µg/L		<5	<5	<5	<5	<5
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	<5	<5	<5	<5
Hexachlorobutadiene	87-68-3	5	µg/L		<5	<5	<5	<5	<5
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		<5	<5	<5	<5	<5
Bromobenzene	108-86-1	5	µg/L		<5	<5	<5	<5	<5
2-Chlorotoluene	95-49-8	5	µg/L		<5	<5	<5	<5	<5
4-Chlorotoluene	106-43-4	5	µg/L		<5	<5	<5	<5	<5
1.3-Dichlorobenzene	541-73-1	5	µg/L		<5	<5	<5	<5	<5
1.4-Dichlorobenzene	106-46-7	5	µg/L		<5	<5	<5	<5	<5
1.2-Dichlorobenzene	95-50-1	5	µg/L		<5	<5	<5	<5	<5
1.2.4-Trichlorobenzene	120-82-1	5	µg/L		<5	<5	<5	<5	<5
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		<5	<5	<5	<5	<5
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		<5	<5	<5	<5	<5

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	QC100	QC100A
				Sampling date / time	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00
Compound	CAS Number	LOR	Unit		ES2409457-001	ES2409457-002	ES2409457-003	ES2409457-006	ES2409457-007
					Result	Result	Result	Result	Result
EP074G: Trihalomethanes - Continued									
Bromodichloromethane	75-27-4	5	µg/L		<5	<5	<5	<5	<5
Dibromochloromethane	124-48-1	5	µg/L		<5	<5	<5	<5	<5
Bromoform	75-25-2	5	µg/L		<5	<5	<5	<5	<5
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		**96.8**	**99.7**	**109**	**107**	**105**
Toluene-D8	2037-26-5	5	%		**101**	**106**	**114**	**112**	**110**
4-Bromofluorobenzene	460-00-4	5	%		**94.1**	**101**	**105**	**106**	**102**

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	SW1	SW2	----	----	----
				Sampling date / time	21-Mar-2024 00:00	21-Mar-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2409457-004	ES2409457-005	--------	--------	--------
					Result	Result	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L		<5	**118**	----	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**118**	**75**	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L		**118**	**75**	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**29**	**17**	----	----	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**102**	**48**	----	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**26**	**15**	----	----	----
Magnesium	7439-95-4	1	mg/L		**12**	**5**	----	----	----
Sodium	7440-23-5	1	mg/L		**66**	**39**	----	----	----
Potassium	7440-09-7	1	mg/L		**5**	**6**	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		**0.009**	**0.113**	----	----	----
Iron	7439-89-6	0.05	mg/L		**0.10**	**1.88**	----	----	----
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		**0.133**	**0.170**	----	----	----
Iron	7439-89-6	0.05	mg/L		**0.48**	**2.56**	----	----	----
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L		**0.5**	**0.2**	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**0.48**	**1.60**	----	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		**0.07**	<0.01	----	----	----
EK058G: Nitrate as N by Discrete Analyser									

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	SW1	SW2	----	----	----
			Sampling date / time	21-Mar-2024 00:00	21-Mar-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2409457-004	ES2409457-005	--------	--------	--------
				Result	Result	----	----	----
EK058G: Nitrate as N by Discrete Analyser - Continued								
Nitrate as N	14797-55-8	0.01	mg/L	**0.05**	<0.01	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**0.12**	<0.01	----	----	----
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	**5.84**	**3.21**	----	----	----
ø Total Cations	----	0.01	meq/L	**5.28**	**3.01**	----	----	----
ø Ionic Balance	----	0.01	%	**4.99**	**3.16**	----	----	----
EP005: Total Organic Carbon (TOC)								
Total Organic Carbon	----	1	mg/L	**10**	**117**	----	----	----
EP020: Oil and Grease (O&G)								
Oil & Grease	----	5	mg/L	<5	**48**	----	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	----	----	----
1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	----	----	----
Chloromethane	74-87-3	50	µg/L	<50	<50	----	----	----
Vinyl chloride	75-01-4	50	µg/L	<50	<50	----	----	----
Bromomethane	74-83-9	50	µg/L	<50	<50	----	----	----
Chloroethane	75-00-3	50	µg/L	<50	<50	----	----	----
Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	----	----	----
1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	----	----	----
Iodomethane	74-88-4	5	µg/L	<5	<5	----	----	----
trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	----	----	----

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	SW1	SW2	----	----	----
				Sampling date / time	21-Mar-2024 00:00	21-Mar-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2409457-004	ES2409457-005	--------	--------	--------
					Result	Result	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
1.1-Dichloroethane	75-34-3	5	µg/L		<5	<5	----	----	----
cis-1.2-Dichloroethene	156-59-2	5	µg/L		<5	<5	----	----	----
1.1.1-Trichloroethane	71-55-6	5	µg/L		<5	<5	----	----	----
1.1-Dichloropropylene	563-58-6	5	µg/L		<5	<5	----	----	----
Carbon Tetrachloride	56-23-5	5	µg/L		<5	<5	----	----	----
1.2-Dichloroethane	107-06-2	5	µg/L		<5	<5	----	----	----
Trichloroethene	79-01-6	5	µg/L		<5	<5	----	----	----
Dibromomethane	74-95-3	5	µg/L		<5	<5	----	----	----
1.1.2-Trichloroethane	79-00-5	5	µg/L		<5	<5	----	----	----
1.3-Dichloropropane	142-28-9	5	µg/L		<5	<5	----	----	----
Tetrachloroethene	127-18-4	5	µg/L		<5	<5	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L		<5	<5	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L		<5	<5	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L		<5	<5	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L		<5	<5	----	----	----
1.2.3-Trichloropropane	96-18-4	5	µg/L		<5	<5	----	----	----
Pentachloroethane	76-01-7	5	µg/L		<5	<5	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	<5	----	----	----
Hexachlorobutadiene	87-68-3	5	µg/L		<5	<5	----	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		<5	<5	----	----	----
Bromobenzene	108-86-1	5	µg/L		<5	<5	----	----	----
2-Chlorotoluene	95-49-8	5	µg/L		<5	<5	----	----	----
4-Chlorotoluene	106-43-4	5	µg/L		<5	<5	----	----	----
1.3-Dichlorobenzene	541-73-1	5	µg/L		<5	<5	----	----	----
1.4-Dichlorobenzene	106-46-7	5	µg/L		<5	<5	----	----	----
1.2-Dichlorobenzene	95-50-1	5	µg/L		<5	<5	----	----	----

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	SW1	SW2	----	----	----
				Sampling date / time	21-Mar-2024 00:00	21-Mar-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2409457-004	ES2409457-005	--------	--------	--------
					Result	Result	----	----	----
EP074F: Halogenated Aromatic Compounds - Continued									
1.2.4-Trichlorobenzene	120-82-1	5	µg/L		<5	<5	----	----	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		<5	<5	----	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		<5	<5	----	----	----
Bromodichloromethane	75-27-4	5	µg/L		<5	<5	----	----	----
Dibromochloromethane	124-48-1	5	µg/L		<5	<5	----	----	----
Bromoform	75-25-2	5	µg/L		<5	<5	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		**101**	**118**	----	----	----
Toluene-D8	2037-26-5	5	%		**107**	**126**	----	----	----
4-Bromofluorobenzene	460-00-4	5	%		**101**	**114**	----	----	----

Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124

CERTIFICATE OF ANALYSIS

Work Order	: **EN2402673**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: 124 PACIFIC HWY GREENWICH 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 26-Mar-2024 17:00
Order number	: TBA	Date Analysis Commenced	: 28-Mar-2024
C-O-C number	: ----	Issue Date	: 08-Apr-2024 13:50
Sampler	: Grace Bendall-Pease		
Site	: Wetherill Park		
Quote number	: EN/000		
No. of samples received	: 5		
No. of samples analysed	: 5		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Thomas Regan	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Dust analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in deposition units e.g., g/m².mth where the sampling procedure is not NATA accredited. ALS Mudgee laboratory is NATA accredited for dust sampling, therefore ALS Mudgee reported deposition units are accredited.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: DEPOSITIONAL DUST (Matrix: AIR)			Sample ID	DDG1 19/02/24 - 21/03/24	DDG2 19/02/24 - 21/03/24	DDG3 19/02/24 - 21/03/24	DDG4 19/02/24 - 21/03/24	DDG5 19/02/24 - 21/03/24
			Sampling date / time	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00	21-Mar-2024 00:00
Compound	CAS Number	LOR	Unit	EN2402673-001	EN2402673-002	EN2402673-003	EN2402673-004	EN2402673-005
				Result	Result	Result	Result	Result
EA120: Ash Content								
Ash Content	----	0.1	g/m².month	1.3	0.7	1.6	1.6	0.2
Ash Content (mg)	----	2	mg	23	12	29	29	4
EA125: Combustible Matter								
Combustible Matter	----	0.1	g/m².month	0.9	0.3	0.8	0.9	0.3
Combustible Matter (mg)	----	2	mg	17	6	14	16	5
EA141: Total Insoluble Matter								
Total Insoluble Matter	----	0.1	g/m².month	2.2	1.0	2.4	2.5	0.5
Total Insoluble Matter (mg)	----	2	mg	40	18	43	45	9

CERTIFICATE OF ANALYSIS

Work Order	: **EN2403589**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: IVAN WARD	Contact	: Josh Alexander
Address	: 124 PACIFIC HWY GREENWICH 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: ----	Telephone	: +61 2 4014 2500
Project	: 117623088	Date Samples Received	: 22-Apr-2024 17:00
Order number	: TBA	Date Analysis Commenced	: 06-May-2024
C-O-C number	: ----	Issue Date	: 07-May-2024 13:34
Sampler	: Grace Bendall-Pease		
Site	: Wetherill Park		
Quote number	: EN/000		
No. of samples received	: 4		
No. of samples analysed	: 4		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

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- Analytical Results

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Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Shane Merrell	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Dust analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in deposition units e.g., g/m².mth where the sampling procedure is not NATA accredited. ALS Mudgee laboratory is NATA accredited for dust sampling, therefore ALS Mudgee reported deposition units are accredited.
- The dust gauges for all samples were full when received by the laboratory. They may have overflowed in the field. Results for these gauges are thus reported on an 'as received' basis.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: DEPOSITIONAL DUST (Matrix: AIR)			Sample ID	DDG1 21/03/24 - 22/04/24	DDG2 21/03/24 - 22/04/24	DDG3 21/03/24 - 22/04/24	DDG4 21/03/24 - 22/04/24	----
			Sampling date / time	22-Apr-2024 00:00	22-Apr-2024 00:00	22-Apr-2024 00:00	22-Apr-2024 00:00	----
Compound	CAS Number	LOR	Unit	EN2403589-001	EN2403589-002	EN2403589-003	EN2403589-004	--------
				Result	Result	Result	Result	----
EA120: Ash Content								
Ash Content	----	0.1	g/m².month	**1.5**	**0.7**	**0.9**	**1.0**	**----**
Ash Content (mg)	----	2	mg	**29**	**14**	**17**	**18**	**----**
EA125: Combustible Matter								
Combustible Matter	----	0.1	g/m².month	**0.4**	**0.8**	**0.6**	**1.0**	**----**
Combustible Matter (mg)	----	2	mg	**7**	**15**	**11**	**19**	**----**
EA141: Total Insoluble Matter								
Total Insoluble Matter	----	0.1	g/m².month	**1.9**	**1.5**	**1.5**	**2.0**	**----**
Total Insoluble Matter (mg)	----	2	mg	**36**	**29**	**28**	**37**	**----**

CERTIFICATE OF ANALYSIS

Work Order	: **EN2405762**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: ----	Telephone	: +61 2 4014 2500
Project	: PS	Date Samples Received	: 25-Jun-2024 17:00
Order number	: 117623088	Date Analysis Commenced	: 01-Jul-2024
C-O-C number	: ----	Issue Date	: 04-Jul-2024 16:22
Sampler	: MV		
Site	: Wetherill Park		
Quote number	: EN/000		
No. of samples received	: 5		
No. of samples analysed	: 5		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

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This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Thomas Regan	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

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LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Dust analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in deposition units e.g., g/m².mth where the sampling procedure is not NATA accredited. ALS Mudgee laboratory is NATA accredited for dust sampling, therefore ALS Mudgee reported deposition units are accredited.
- The dust gauges for samples 001-003 were full when received by the laboratory. They may have overflowed in the field. Results for these gauges are thus reported on an 'as received' basis. No algaecide correction has been applied to EA139 Soluble Matter or EA142 Total Solids results (where applicable).
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: DEPOSITIONAL DUST (Matrix: AIR)				Sample ID	DDG1 24/05/24 - 24/06/24	DDG2 24/05/24 - 24/06/24	DDG3 24/05/24 - 24/06/24	DDG4 24/05/24 - 24/06/24	DDG5 24/05/24 - 24/06/24
				Sampling date / time	24-Jun-2024 00:00	24-Jun-2024 00:00	24-Jun-2024 00:00	24-Jun-2024 00:00	24-Jun-2024 00:00
Compound	CAS Number	LOR	Unit		EN2405762-001	EN2405762-002	EN2405762-003	EN2405762-004	EN2405762-005
					Result	Result	Result	Result	Result
EA120: Ash Content									
Ash Content	----	0.1	g/m².month		**2.4**	**0.3**	**0.7**	**0.9**	**0.2**
Ash Content (mg)	----	2	mg		**43**	**6**	**13**	**16**	**3**
EA125: Combustible Matter									
Combustible Matter	----	0.1	g/m².month		**0.7**	**0.3**	**0.3**	**0.5**	<0.1
Combustible Matter (mg)	----	2	mg		**14**	**5**	**6**	**10**	<2
EA141: Total Insoluble Matter									
Total Insoluble Matter	----	0.1	g/m².month		**3.1**	**0.6**	**1.0**	**1.4**	**0.2**
Total Insoluble Matter (mg)	----	2	mg		**57**	**11**	**19**	**26**	**3**

CERTIFICATE OF ANALYSIS

Work Order	: **ES2420714**	Page	: 1 of 6
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Sydney
Contact	: IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 117623088 (PS134467)	Date Samples Received	: 24-Jun-2024 16:55
Order number	: 117623088/3	Date Analysis Commenced	: 25-Jun-2024
C-O-C number	: ----	Issue Date	: 01-Jul-2024 18:17
Sampler	: MICHAEL VAVAYIS		
Site	: WETHERILL PARK		
Quote number	: EN/000		
No. of samples received	: 7		
No. of samples analysed	: 7		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- Unable to conduct VHC's analysis as VOC vial was not received.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	QC100	QC100A
				Sampling date / time	24-Jun-2024 00:00	24-Jun-2024 00:00	24-Jun-2024 00:00	24-Jun-2024 00:00	24-Jun-2024 00:00
Compound	CAS Number	LOR	Unit		ES2420714-001	ES2420714-002	ES2420714-003	ES2420714-006	ES2420714-007
					Result	Result	Result	Result	Result
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		669	364	806	673	672
Total Alkalinity as CaCO3	----	1	mg/L		669	364	806	673	672
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		37	408	586	36	36
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		112	409	3490	115	125
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		176	47	22	174	174
Magnesium	7439-95-4	1	mg/L		53	59	259	51	52
Sodium	7440-23-5	1	mg/L		115	442	2040	113	112
Potassium	7440-09-7	1	mg/L		10	6	17	9	10
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		0.623	0.009	2.18	0.613	0.610
Iron	7439-89-6	0.05	mg/L		<0.05	0.07	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		0.688	0.106	2.35	0.689	0.700
Iron	7439-89-6	0.05	mg/L		0.93	1.44	0.88	0.93	0.94
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L		0.3	0.4	0.6	0.3	0.3
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		1.18	0.02	0.26	1.29	1.14
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		<0.01	0.47	0.07	<0.01	0.01
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	GW1	GW3	GW4	QC100	QC100A
				Sampling date / time	24-Jun-2024 00:00	24-Jun-2024 00:00	24-Jun-2024 00:00	24-Jun-2024 00:00	24-Jun-2024 00:00
Compound	CAS Number	LOR	Unit		ES2420714-001	ES2420714-002	ES2420714-003	ES2420714-006	ES2420714-007
					Result	Result	Result	Result	Result
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser - Continued									
Nitrite + Nitrate as N	----	0.01	mg/L		<0.01	**0.47**	**0.07**	<0.01	**0.01**
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		**17.3**	**27.3**	**127**	**17.4**	**17.7**
ø Total Cations	----	0.01	meq/L		**18.4**	**26.6**	**112**	**18.0**	**18.1**
ø Ionic Balance	----	0.01	%		**3.10**	**1.34**	**6.36**	**1.65**	**1.08**
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L		**10**	**19**	**10**	**10**	<1

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	SW1	SW2	----	----	----
				Sampling date / time	24-Jun-2024 00:00	24-Jun-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2420714-004	ES2420714-005	--------	--------	--------
					Result	Result	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L		**66**	**30**	----	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**162**	**96**	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L		**162**	**96**	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**62**	**25**	----	----	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**152**	**40**	----	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**36**	**20**	----	----	----
Magnesium	7439-95-4	1	mg/L		**20**	**7**	----	----	----
Sodium	7440-23-5	1	mg/L		**106**	**46**	----	----	----
Potassium	7440-09-7	1	mg/L		**5**	**6**	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		**0.042**	**0.083**	----	----	----
Iron	7439-89-6	0.05	mg/L		<0.05	**0.58**	----	----	----
EG020T: Total Metals by ICP-MS									
Manganese	7439-96-5	0.001	mg/L		**0.149**	**0.126**	----	----	----
Iron	7439-89-6	0.05	mg/L		**1.54**	**1.97**	----	----	----
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L		**0.4**	**0.2**	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**0.13**	**0.96**	----	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		**0.05**	<0.01	----	----	----
EK058G: Nitrate as N by Discrete Analyser									

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	SW1	SW2	----	----	----
				Sampling date / time	24-Jun-2024 00:00	24-Jun-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2420714-004	ES2420714-005	--------	--------	--------
					Result	Result	----	----	----
EK058G: Nitrate as N by Discrete Analyser - Continued									
Nitrate as N	14797-55-8	0.01	mg/L		**0.67**	**0.02**	**----**	**----**	**----**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.72**	**0.02**	**----**	**----**	**----**
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		**8.82**	**3.57**	**----**	**----**	**----**
ø Total Cations	----	0.01	meq/L		**8.18**	**3.73**	**----**	**----**	**----**
ø Ionic Balance	----	0.01	%		**3.73**	**2.21**	**----**	**----**	**----**
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L		**10**	**10**	**----**	**----**	**----**
EP020: Oil and Grease (O&G)									
Oil & Grease	----	5	mg/L		<5	<5	**----**	**----**	**----**

CERTIFICATE OF ANALYSIS

Work Order	: **EN2405762**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: ----	Telephone	: +61 2 4014 2500
Project	: PS	Date Samples Received	: 25-Jun-2024 17:00
Order number	: 117623088	Date Analysis Commenced	: 01-Jul-2024
C-O-C number	: ----	Issue Date	: 04-Jul-2024 16:22
Sampler	: MV		
Site	: Wetherill Park		
Quote number	: EN/000		
No. of samples received	: 5		
No. of samples analysed	: 5		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Thomas Regan	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Dust analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in deposition units e.g., g/m².mth where the sampling procedure is not NATA accredited. ALS Mudgee laboratory is NATA accredited for dust sampling, therefore ALS Mudgee reported deposition units are accredited.
- The dust gauges for samples 001-003 were full when received by the laboratory. They may have overflowed in the field. Results for these gauges are thus reported on an 'as received' basis. No algaecide correction has been applied to EA139 Soluble Matter or EA142 Total Solids results (where applicable).
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: DEPOSITIONAL DUST (Matrix: AIR)				Sample ID	DDG1 24/05/24 - 24/06/24	DDG2 24/05/24 - 24/06/24	DDG3 24/05/24 - 24/06/24	DDG4 24/05/24 - 24/06/24	DDG5 24/05/24 - 24/06/24
				Sampling date / time	24-Jun-2024 00:00	24-Jun-2024 00:00	24-Jun-2024 00:00	24-Jun-2024 00:00	24-Jun-2024 00:00
Compound	CAS Number	LOR	Unit		EN2405762-001	EN2405762-002	EN2405762-003	EN2405762-004	EN2405762-005
					Result	Result	Result	Result	Result
EA120: Ash Content									
Ash Content	----	0.1	g/m².month		**2.4**	**0.3**	**0.7**	**0.9**	**0.2**
Ash Content (mg)	----	2	mg		**43**	**6**	**13**	**16**	**3**
EA125: Combustible Matter									
Combustible Matter	----	0.1	g/m².month		**0.7**	**0.3**	**0.3**	**0.5**	<0.1
Combustible Matter (mg)	----	2	mg		**14**	**5**	**6**	**10**	<2
EA141: Total Insoluble Matter									
Total Insoluble Matter	----	0.1	g/m².month		**3.1**	**0.6**	**1.0**	**1.4**	**0.2**
Total Insoluble Matter (mg)	----	2	mg		**57**	**11**	**19**	**26**	**3**

CERTIFICATE OF ANALYSIS

Work Order	: **EN2407821**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: PS	Date Samples Received	: 26-Jul-2024 17:00
Order number	: 117623088	Date Analysis Commenced	: 31-Jul-2024
C-O-C number	: ----	Issue Date	: 06-Aug-2024 14:45
Sampler	: MV		
Site	: Whetherill Park		
Quote number	: EN/000		
No. of samples received	: 5		
No. of samples analysed	: 5		

Accreditation No. 825
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ISO/IEC 17025 - Testing

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This Certificate of Analysis contains the following information:

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- Analytical Results

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Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Thomas Regan	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

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Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Dust analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in deposition units e.g., g/m².mth where the sampling procedure is not NATA accredited.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: DEPOSITIONAL DUST (Matrix: AIR)				Sample ID	DDG1 24/06/24 - 25/07/24	DDG2 24/06/24 - 25/07/24	DDG3 24/06/24 - 25/07/24	DDG4 24/06/24 - 25/07/24	DDG5 24/06/24 - 25/07/24
				Sampling date / time	25-Jul-2024 00:00	25-Jul-2024 00:00	25-Jul-2024 00:00	25-Jul-2024 00:00	25-Jul-2024 00:00
Compound	CAS Number	LOR	Unit		EN2407821-001	EN2407821-002	EN2407821-003	EN2407821-004	EN2407821-005
					Result	Result	Result	Result	Result
EA120: Ash Content									
Ash Content	----	0.1	g/m².month		**1.3**	**0.2**	**0.4**	**0.5**	<0.1
Ash Content (mg)	----	2	mg		**24**	**4**	**8**	**10**	<2
EA125: Combustible Matter									
Combustible Matter	----	0.1	g/m².month		**0.5**	**0.1**	**0.3**	**0.3**	<0.1
Combustible Matter (mg)	----	2	mg		**8**	**2**	**4**	**4**	<2
EA141: Total Insoluble Matter									
Total Insoluble Matter	----	0.1	g/m².month		**1.8**	**0.3**	**0.7**	**0.8**	<0.1
Total Insoluble Matter (mg)	----	2	mg		**32**	**6**	**12**	**14**	<2

CERTIFICATE OF ANALYSIS

Work Order	: **EN2409532**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: PS	Date Samples Received	: 22-Aug-2024 17:00
Order number	: 117623088	Date Analysis Commenced	: 26-Aug-2024
C-O-C number	: ----	Issue Date	: 02-Sep-2024 14:49
Sampler	: MV		
Site	:		
Quote number	: EN/000		
No. of samples received	: 5		
No. of samples analysed	: 5		

Accreditation No. 825
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ISO/IEC 17025 - Testing

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- General Comments
- Analytical Results

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Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Shane Merrell	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

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Where moisture determination has been performed, results are reported on a dry weight basis.

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Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

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Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Dust analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in deposition units e.g., g/m².mth where the sampling procedure is not NATA accredited.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: DEPOSITIONAL DUST (Matrix: AIR)				Sample ID	DDG1 25/07/24 - 22/08/24	DDG2 25/07/24 - 22/08/24	DDG3 25/07/24 - 22/08/24	DDG4 25/07/24 - 22/08/24	DDG5 25/07/24 - 22/08/24
				Sampling date / time	22-Aug-2024 00:00	22-Aug-2024 00:00	22-Aug-2024 00:00	22-Aug-2024 00:00	22-Aug-2024 00:00
Compound	CAS Number	LOR	Unit		EN2409532-001	EN2409532-002	EN2409532-003	EN2409532-004	EN2409532-005
					Result	Result	Result	Result	Result
EA120: Ash Content									
Ash Content	----	0.1	g/m².month		**2.5**	**0.7**	**0.9**	**1.3**	**0.1**
Ash Content (mg)	----	2	mg		**42**	**12**	**15**	**21**	<2
EA125: Combustible Matter									
Combustible Matter	----	0.1	g/m².month		**0.8**	**0.5**	**0.4**	**0.6**	<0.1
Combustible Matter (mg)	----	2	mg		**12**	**8**	**7**	**10**	<2
EA141: Total Insoluble Matter									
Total Insoluble Matter	----	0.1	g/m².month		**3.3**	**1.2**	**1.3**	**1.9**	**0.1**
Total Insoluble Matter (mg)	----	2	mg		**54**	**20**	**22**	**31**	**2**

CERTIFICATE OF ANALYSIS

Work Order	: **EN2411408**	Page	: 1 of 2
Client	: **GOLDER ASSOCIATES**	Laboratory	: Environmental Division Newcastle
Contact	: MR IVAN WARD	Contact	: Josh Alexander
Address	: LEVEL 8 40 MOUNT STREET NORTH SYDNEY NSW, AUSTRALIA 2065	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: +61 02 9478 3900	Telephone	: +61 2 4014 2500
Project	: PS	Date Samples Received	: 20-Sep-2024 17:00
Order number	: 117623088	Date Analysis Commenced	: 23-Sep-2024
C-O-C number	: ----	Issue Date	: 02-Oct-2024 17:07
Sampler	: MV		
Site	: Wetherill Park		
Quote number	: EN/000		
No. of samples received	: 5		
No. of samples analysed	: 5		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Thomas Regan	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Dust analysis as per AS3580.10.1-2016. Samples passed through a 1mm sieve prior to analysis. NATA accreditation does not apply for results reported in deposition units e.g., g/m².mth where the sampling procedure is not NATA accredited.
- For dust analysis, the Limit of Reporting (LOR) referenced in the reports for deposited matter parameters represents the reporting increment rather than reporting limit.

Analytical Results

Sub-Matrix: DEPOSITIONAL DUST (Matrix: AIR)				Sample ID	DDG1 22/08/24 - 20/09/24	DDG2 22/08/24 - 20/09/24	DDG3 22/08/24 - 20/09/24	DDG4 22/08/24 - 20/09/24	DDG5 22/08/24 - 20/09/24
				Sampling date / time	20-Sep-2024 00:00	20-Sep-2024 00:00	20-Sep-2024 00:00	20-Sep-2024 00:00	20-Sep-2024 00:00
Compound	CAS Number	LOR	Unit		EN2411408-001	EN2411408-002	EN2411408-003	EN2411408-004	EN2411408-005
					Result	Result	Result	Result	Result
EA120: Ash Content									
Ash Content	----	0.1	g/m².month		**1.2**	**0.5**	**0.6**	**0.7**	**0.1**
Ash Content (mg)	----	2	mg		**20**	**9**	**10**	**12**	<2
EA125: Combustible Matter									
Combustible Matter	----	0.1	g/m².month		**0.4**	**0.3**	**0.3**	**0.4**	**0.2**
Combustible Matter (mg)	----	2	mg		**8**	**4**	**5**	**6**	**4**
EA141: Total Insoluble Matter									
Total Insoluble Matter	----	0.1	g/m².month		**1.6**	**0.8**	**0.9**	**1.1**	**0.3**
Total Insoluble Matter (mg)	----	2	mg		**28**	**13**	**15**	**18**	**5**

Appendix D

Important Information

The document ("Report") to which this page is attached and which this page forms a part of, has been issued by Golder Associates Pty Ltd ("Golder") subject to the important limitations and other qualifications set out below.

This Report constitutes or is part of services ("Services") provided by Golder to its client ("Client") under and subject to a contract between Golder and its Client ("Contract"). The contents of this page are not intended to and do not alter Golder's obligations (including any limits on those obligations) to its Client under the Contract.

This Report is provided for use solely by Golder's Client and persons acting on the Client's behalf, such as its professional advisers. Golder is responsible only to its Client for this Report. Golder has no responsibility to any other person who relies or makes decisions based upon this Report or who makes any other use of this Report. Golder accepts no responsibility for any loss or damage suffered by any person other than its Client as a result of any reliance upon any part of this Report, decisions made based upon this Report or any other use of it.

This Report has been prepared in the context of the circumstances and purposes referred to in, or derived from, the Contract and Golder accepts no responsibility for use of the Report, in whole or in part, in any other context or circumstance or for any other purpose.

The scope of Golder's Services and the period of time they relate to are determined by the Contract and are subject to restrictions and limitations set out in the Contract. If a service or other work is not expressly referred to in this Report, do not assume that it has been provided or performed. If a matter is not addressed in this Report, do not assume that any determination has been made by Golder in regards to it.

At any location relevant to the Services conditions may exist which were not detected by Golder, in particular due to the specific scope of the investigation Golder has been engaged to undertake. Conditions can only be verified at the exact location of any tests undertaken. Variations in conditions may occur between tested locations and there may be conditions which have not been revealed by the investigation and which have not therefore been taken into account in this Report.

Golder accepts no responsibility for and makes no representation as to the accuracy or completeness of the information provided to it by or on behalf of the Client or sourced from any third party. Golder has assumed that such information is correct unless otherwise stated and no responsibility is accepted by Golder for incomplete or inaccurate data supplied by its Client or any other person for whom Golder is not responsible. Golder has not taken account of matters that may have existed when the Report was prepared but which were only later disclosed to Golder.

Having regard to the matters referred to in the previous paragraphs on this page in particular, carrying out the Services has allowed Golder to form no more than an opinion as to the actual conditions at any relevant location. That opinion is necessarily constrained by the extent of the information collected by Golder or otherwise made available to Golder. Further, the passage of time may affect the accuracy, applicability or usefulness of the opinions, assessments or other information in this Report. This Report is based upon the information and other circumstances that existed and were known to Golder when the Services were performed and this Report was prepared. Golder has not considered the effect of any possible future developments including physical changes to any relevant location or changes to any laws or regulations relevant to such location.

Where permitted by the Contract, Golder may have retained subconsultants affiliated with Golder to provide some or all of the Services. However, it is Golder which remains solely responsible for the Services and there is no legal recourse against any of Golder's affiliated companies or the employees, officers or directors of any of them.

By date, or revision, the Report supersedes any prior report or other document issued by Golder dealing with any matter that is in the Report.

Any uncertainty as to the extent to which this Report can be used or relied upon in any respect should be referred to Golder for clarification.

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WSP is one of the world's leading professional services consulting firms. We are dedicated to our local communities and propelled by international brainpower. We are technical experts and strategic advisors including engineers, technicians, scientists, planners, surveyors and environmental specialists, as well as other design, program and construction management professionals. We design lasting solutions in the Transport & Water, Property & Buildings, Earth & Environment, and Mining & Power sector as well as offering strategic Advisory, Engagement & Digital services. With approximately 6,100 talented people in more than 50 offices in Australia and New Zealand, we engineer future ready projects that will help societies grow for lifetimes to come. www.wsp.com/en-au/.