Barossa Infrastructure Ltd
Recycled Water Irrigation Scheme - Gomersal

2023/2024 Report

Barossa Infrastructure Ltd (BIL) supplies water to viticulturalists in the Barossa Valley for supplementary irrigation.

BIL's primary water source is SA Water's Warren Reservoir, which is supplemented with River Murray water via SA Water's Mannum-Adelaide pipeline. In this way raw water is delivered to BIL's infrastructure at Fromm Square, Williamstown. At SA Water's discretion, SA Water can also choose to supply BIL filtered and chloraminated water via the Swan Reach-Stockwell pipeline, connecting to BIL at the same Williamstown location. Refer to Figure 1.

BIL also receives treated CWMS water from Barossa Council, which is blended with River Murray water and supplied to a limited number of customers from BIL's Gomersal Rd pipeline. Refer to the red circled area in Figure 1.

Historically, BIL has had to provide SA Health data and information to demonstrate compliance with the licence to operate the recycled water scheme. In 2024, BIL was advised by SA Health that this was no longer required. Nevertheless, BIL will continue to prepare and publish this report to ensure growers have the necessary information to sustainably manage their vineyards.

In 2023/24, CWMS water represented 3.0% of BIL's total water supply across the whole scheme, and 17% of the Gomersal Rd pipeline supply. See the following table for a monthly breakdown.

Table 1 - Monthly Volume of Source Water into BIL's Gomersal Rd Pipeline

	CWMS Source		Fromm Sq Source		Total
	(ML)	(%)	(ML)	(%)	(ML)
Jul-23	30.8	92%	2.8	8%	33.6
Aug-23	28.8	38%	47.3	62%	76.1
Sep-23	23.6	12%	177.4	88%	201.0
Oct-23	24.3	12%	177.7	88%	202.0
Nov-23	30.8	13%	199.1	87%	229.9
Dec-23	30.7	26%	88.7	74%	119.4
Jan-24	36.4	12%	256.6	88%	293.0
Feb-24	33	9%	334.1	91%	367.1
Mar-24	20.8	17%	100.6	83%	121.4
Apr-24	6.9	6%	117.0	94%	123.9
May-24	33.4	48%	35.6	52%	69.0
Jun-24	27.9	54%	23.9	46%	51.8
TOTAL VOLUME	**327.4**	**17%**	**1560.9**	**83%**	**1888.3**

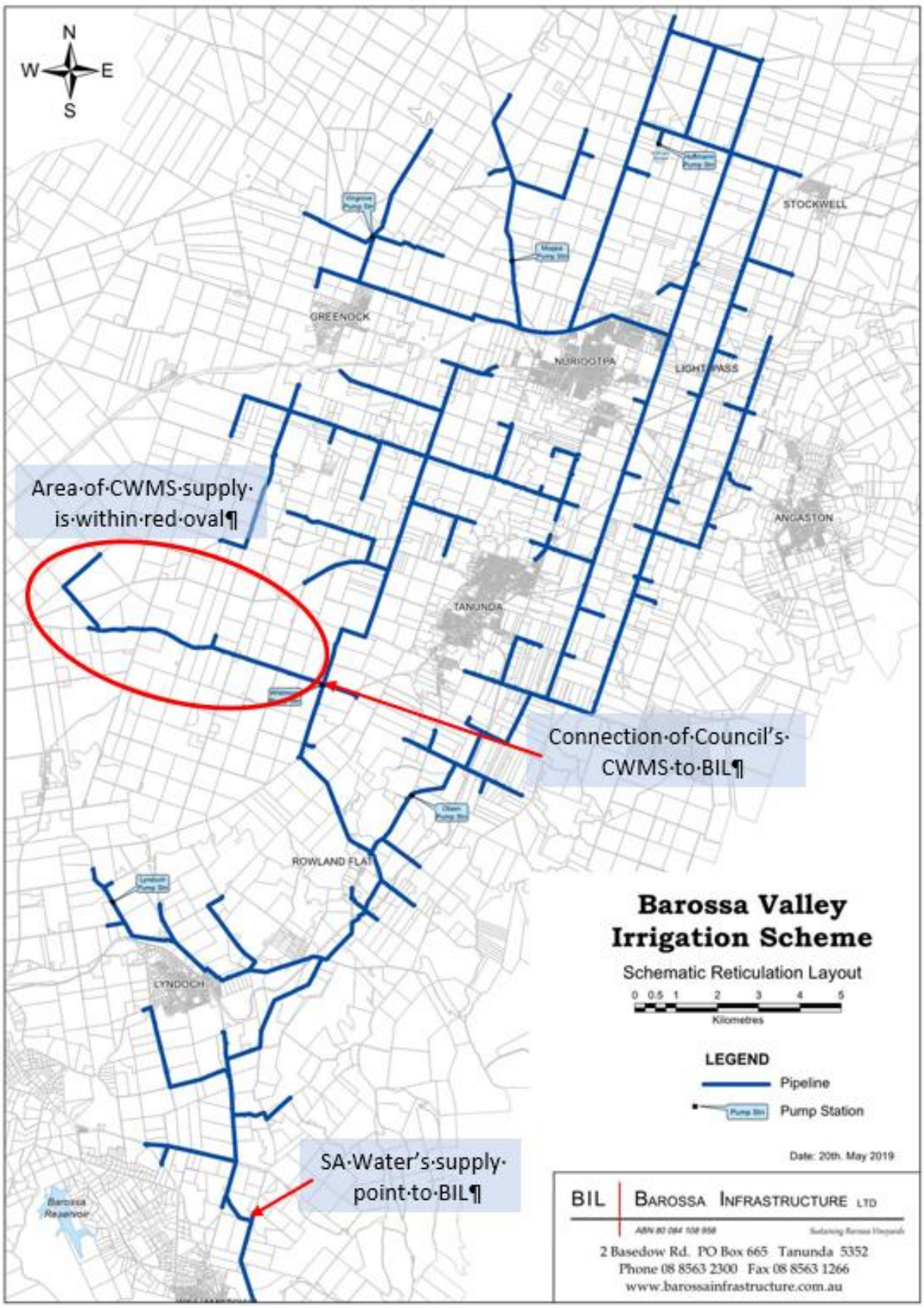

Figure 1. BIL's pipeline network, showing location of source waters and area of CWMS supply

Monthly and annual samples of the CWMS supply to BIL are taken by Council just upstream of the interface point. These samples are of only CWMS water. Refer to Table 2.

BIL takes an additional sample annually at the same location and tests for some additional parameters. Refer Attachment 1.

Table 2 and Attachment 1 data are from undiluted CWMS water.

Table 3 calculates approximate monthly weighted blended values for the parameters listed in BIL's SA Health approval.

Table 2 - Barossa Council Sampling Analysis Results

From Council's Monthly Suite of Testing.
Sampled at the interface point, sampling only <u>undiluted</u> CWMS water.

Date	Ammonia as N	BOD	Ca	COD	Conductivity	E. coli	Grease & Oil	Mg	N+N as N	Nitrate as N	Nitrite as N	pH	Phos. Total	Sodium	Sodium AR	Suspended S	Temp for pH	TKN as N	Total DS	Free Chlorine	Total Chlorine
	mg/L	mg/L	mg/L	mg/L	uScm	MPN/ 100mL	mg/L	mg/L	mg/L	mg/L	mg/L	Units	mg/L	mg/L	mg/L	mg/L	Deg C	mg/L	mg/L	mg/L	mg/L
18/07/2023	29.5	12	35.2	159	1700	0	4	28.3	3.41	0.74	2.67	7.3	8.53	188	5.72	23	19.9	37.3	947		
22/08/2023	31.6	24	29.2	196	1540	0	2	25.5	4.21	3.9	0.31	7.3	9.71	159	5.19	32	20.7	44.3	857		
19/09/2023	26.1	11	29	73	1450	0	2	23.9	3.45	2.52	0.93	7.3	10.4	156	5.19	16	20.7	36.7	806		
17/10/2023	22.7	3	31.8	102	1420	0	<1	23.8	2.88	1.91	0.97	7.5	10.5	173	5.65	20	21.1	32.1	789		
21/11/2023	11.6	10	31.7	95	1260	0	1	21.5	1.7	1.63	0.07	7.2	12.7	140	4.76	33	19.6	19.6	300		
19/12/2023	8.5	7	33.3	74	1140	0	<1	19.1	1.19	0.95	0.24	7.1	11.1	134	4.58	13	21	13.4	633		
23/01/2024	5.02	8	33.1	92	1090	0	4	19.5	<0.06	<0.06	<0.06	7.5	10.2	139	4.74	23	22	10.6	605		
20/02/2024	No results provided																				
19/03/2024	9.77	6	29.8	76	931	0	2	11.9	0.28	0.02	0.26	7.1	10.2	106	4.15	7	19.7	16.9	516		
23/04/2024	Not supplying to BIL at time of sample																				
21/05/2024	7.72	13	29	104	1000	0	1	14.8	6.14	5.13	1.01	7.1	10.5	126	4.75	30	18.9	16.1	555		
18/06/2024	12.4	7	32	85	1040	1	0	14.9	5.72	1.36	4.36	7.2	10	135	4.94	14	20.5	19	577		
27/07/2024	19.9	5	24.5	79	1050	0	<1	13.5	4.01	0.59	3.42	7.2	9.36	105	4.32	12	20.8	26.3	583		

From Council's Annual Suite of Testing.
Sampled at the interface point, sampling only <u>undiluted</u> CWMS water.

Date	Aluminium - Total	Ammonia as N	Arsenic - Total	Beryllium - Total	Biochemical Oxygen Demand	Boron - Soluble	Cadmium - Total	Calcium	Chemical Oxygen Demand	Chromium - Total	Cobalt - Total	Conductivity	Copper - Total	E.coli	Fluoride	Grease and Oil	Iron - Total	Lead - Total	Lithium - Total	Magnesium	Manganese - Total
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	MPN/100m	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
18/07/2023	0.065	29.5	0.00076	<.0002	12	0.167	<0.0001	35.2	159	0.0006	0.0004	1700	0.016	0	0.77	4	0.1135	0.0004	0.0056	28.3	0.0321

Date	Mercury - Total	Molybdenum - Total	Nickel - Total	Nitrate + Nitrite as N	Nitrate as Nitrogen	Nitrite as Nitrogen	pH	Phosphorus - Total	Selenium - Total	Sodium	Sodium Adsorption Ratio - Calculation	Suspended Solids	Temperature at which pH is measured	TKN as Nitrogen	Total Dissolved Solids (by EC)	Uranium - Total	Vanadium - Total	Zinc - Total
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pH units	mg/L	mg/L	mg/L		mg/L	degC	mg/L	mg/L	mg/L	mg/L	mg/L
	0.00003	0.0007	0.0019	3.41	0.74	2.67	7.3	8.53	0.0003	188	5.72	23	19.9	37.3	947	0.0005	0.0009	0.0627

Table 3 - Calculation of Weighted Average Blended Parameters

Month	Volume		BOD			Suspended Solids			E. coli			Total Chlorine		
			Criteria ≤20mg/L			Criteria ≤30mg/L			Criteria 100/100mL			Criteria >1mg/L		
	CWMS	Fromm Sq	CWMS	Fromm Sq	Weighted Average	CWMS	Fromm Sq	Weighted Average	CWMS	Fromm Sq	Weighted Average	CWMS	Fromm Sq*	Weighted Average
	ML	ML	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100mL	cfu/100mL	cfu/100mL	mg/L	mg/L	mg/L
Jul-22	30.8	2.8	12	5	11	23	1	711	0	0	0	0	3.6	0.3
Aug-22	28.8	47.3	24	4	12	32	1	969	0	0	0	0	3.6	2.2
Sep-22	23.6	177.4	11	3	4	16	1	555	0	0	0	0	3.7	3.3
Oct-22	24.3	177.7	3	2	2	20	1	664	0	0	0	0	3.7	3.3
Nov-22	30.8	199.1	10	2	3	33	1	1216	0	0	0	0	3	2.6
Dec-22	30.7	88.7	7	2	3	13	1	488	0	0	0	0	2	1.5
Jan-23	36.4	256.6	8	2	3	23	1	1094	0	0	0	0	1	0.9
Feb-23	33	334.1	7	2	2	15	2	1163	0	0	0	0	1	0.9
Mar-23	20.8	100.6	6	2	3	7	4	548	0	0	0	0	1	0.8
Apr-23	6.9	117.0	10	2	2	19	6	833	0	0	0	0	1	0.9
May-23	33.4	35.6	13	2	7	30	6	1216	0	0	0	0	1	0.5
Jun-23	27.9	23.9	7	2	5	14	6	534	1	0	27.9	0	1	0.5

Note: Grey coloured values are estimates based on the sample results before or after it, and therefore the weighted average is approximate only.
Note: Criteria are from SA Health Approval Number WWI-11052.
Note: * It is anticipated that all chlorine available at Fromm Sq will have been consumed during transit to the CWMS scheme, and so these values are considered overly optimistic.

Attachment 1 – BIL's CWMS Only Water Quality Sampling Results

The attached test results contain data from Fromm Sq in the left hand column and CWMS data is the right hand column.

Corporate Accreditation No.1115 Chemical and Biological Testing
Accredited for compliance with ISO/IEC 17025 - Testing

FINAL ANALYTICAL REPORT

389996

Customer Information

Customer	Barossa Infrastructure Ltd
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CSR ID	122622-2024-CSR-1
Account #	122622
Project	AWQC-195380 Barossa Infrastructure Ltd - Routine 24/25
Samples #	2
Purchase order #	

Laboratory Information

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ABN	69336525019 A business unit of the South Australian Water Corporation
AWQC Reference	389996
Date samples received	12/07/2024
Date reported	6/09/2024
Page	Page 1 of 11

Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2024-004-5993	92112	Barossa Infrastructure	12/07/2024	Turbidity	Test not processed within holding time
2024-004-5993	92112	Barossa Infrastructure	12/07/2024	pH	Test not processed within holding time
2024-004-5993	92112	Barossa Infrastructure	12/07/2024	Suspended Solids	Test not processed within holding time
2024-004-5994	84513	Barossa Infrastucture Ltd - Fromms Square Williamstown	12/07/2024	Turbidity	Test not processed within holding time
2024-004-5994	84513	Barossa Infrastucture Ltd - Fromms Square Williamstown	12/07/2024	pH	Test not processed within holding time
2024-004-5994	84513	Barossa Infrastucture Ltd - Fromms Square Williamstown	12/07/2024	TKN as N	Dependent results are within acceptable analytical uncertainty
2024-004-5994	84513	Barossa Infrastucture Ltd - Fromms Square Williamstown	12/07/2024	Suspended Solids	Test not processed within holding time

This report supercedes the following issued reports: 388749

AWQC Signatories

This document has been electronically signed by the authorised signatories below .

Name	Title
Mira Banasiak	Supervisor Bacteriology and Molecular Testing Se
Dzung Bui	Supervisor Metals and Physical
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	Description					
	Sampling Point		84513-Barossa Infrastucture Ltd - Fromms Square Williamstown	92112-Barossa Infrastructure		
	Sample ID		*2024-004-5994	*2024-004-5993		
	Sampled Date		12/07/2024 08:37	12/07/2024 09:58		
	Collection Type		AWQC Collected	AWQC Collected		
Parameter	LOR	Units	Result	Result		
Australian Laboratory Services Pty Ltd - New South Wales						
	Bottle Temp (°C):		*NA*	*NA*		
Multiresidue Pesticides Method: EP202LLEP206LLEP234 W09-023	*Tested Date:*					
!External Lab Report No.	-		ES2423303	ES2423303		
2 4 5-T	-	µg/L	<0.01	<0.01		
2 4 6-T	-	µg/L	<0.1	<0.1		
2 4-D	-	µg/L	<0.01	<0.01		
2 4-DB	-	µg/L	<0.01	<0.01		
2 4-DP	-	µg/L	<0.01	<0.01		
2 6-D	-	µg/L	<0.1	<0.1		
2-Aminobenzimidazole	-	µg/L	<0.01	<0.01		
3-Hydroxy Carbofuran	-	µg/L	<0.02	<0.02		
4-Chlorophenoxy acetic acid	-	µg/L	<0.01	<0.01		
Abamectin	-	µg/L	<0.1	<0.1		
Acephate	-	µg/L	<0.5	<0.5		
Alachlor	-	µg/L	<0.1	<0.1		
Aldicarb	-	µg/L	<0.05	<0.05		
Ametryn	-	µg/L	<0.01	<0.01		
Aminopyralid	-	µg/L	<0.1	<0.1		
Amitraz	-	µg/L	<100	<100		
Atrazine	-	µg/L	<0.01	<0.01		
Atrazine-desethyl	-	µg/L	<0.1	<0.1		
Atrazine-desisopropyl	-	µg/L	<0.1	<0.1		
Azinphos-ethyl	-	µg/L	<0.02	<0.02		
Azinphos-methyl	-	µg/L	<0.02	<0.02		
Azoxystrobin	-	µg/L	<0.1	<0.1		
Bendiocarb	-	µg/L	<0.10	<0.10		
Benomyl	-	µg/L	<0.01	<0.01		
Bensulfuron methyl	-	µg/L	<0.1	<0.1		
Bensulide	-	µg/L	<0.1	<0.1		
Boscalid	-	µg/L	<0.1	<0.1		
Bromacil	-	µg/L	<0.02	<0.02		
Bromophos-ethyl	-	µg/L	<0.10	<0.10		
Butachlor	-	µg/L	<0.1	<0.1		
Carbaryl	-	µg/L	<0.01	<0.01		
Carbendazim (Thiophanate methyl)	-	µg/L	<0.1	<0.1		
Carbofenothion	-	µg/L	<0.02	<0.02		
Carbofuran	-	µg/L	<0.01	<0.01		
Carboxin	-	µg/L	<0.1	<0.1		
Carfentrazone-ethyl	-	µg/L	<0.1	<0.1		
Chlorantraniliprole	-	µg/L	<0.1	<0.1		

	Description		
	Sampling Point	84513-Barossa Infrastucture Ltd - Fromms Square Williamstown	92112-Barossa Infrastructure
	Sample ID	*2024-004-5994	*2024-004-5993
	Sampled Date	12/07/2024 08:37	12/07/2024 09:58
	Collection Type	AWQC Collected	AWQC Collected

Australian Laboratory Services Pty Ltd - New South Wales

Parameter	LOR	Units	Result	Result		
Bottle Temp (°C):			*NA*	*NA*		
Multiresidue Pesticides Method: EP202LLEP206LLEP234 W09-023						
Tested Date:						
Chlorfenvinphos	-	µg/L	<0.02	<0.02		
Chloroxuron	-	µg/L	<0.1	<0.1		
Chlorpyrifos	-	µg/L	<0.02	<0.02		
Chlorpyrifos-methyl	-	µg/L	<0.2	<0.2		
Chlorsulfuron	-	µg/L	<0.2	<0.2		
Clopyralid	-	µg/L	<0.05	<0.05		
Coumaphos	-	µg/L	<0.01	<0.01		
Cyanazine	-	µg/L	<0.02	<0.02		
Cyproconazole	-	µg/L	<0.02	<0.02		
Cyprodinil	-	µg/L	<0.01	<0.01		
Cyromazine	-	µg/L	<0.05	<0.05		
Demeton-O	-	µg/L	<0.02	<0.02		
Demeton-O & Demeton-S	-	µg/L	<0.02	<0.02		
Demeton-S	-	µg/L	<0.02	<0.02		
Demeton-S-methyl	-	µg/L	<0.02	<0.02		
Diazinon	-	µg/L	<0.01	<0.01		
Dicamba	-	µg/L	<0.01	<0.01		
Dichlorvos	-	µg/L	<0.20	<0.20		
Diclofop-methyl	-	µg/L	<0.05	<0.05		
Difenoconazole	-	µg/L	<0.02	<0.02		
Diflubenzuron	-	µg/L	<0.1	<0.1		
Dimethoate	-	µg/L	<0.02	<0.02		
Diphenamid	-	µg/L	<0.1	<0.1		
Disulfoton	-	µg/L	<0.05	<0.05		
Diuron	-	µg/L	<0.02	<0.02		
EPN	-	µg/L	<0.05	<0.05		
EPTC	-	µg/L	<0.1	<0.1		
Ethion	-	µg/L	<0.02	<0.02		
Ethoprophos	-	µg/L	<0.01	<0.01		
Etridiazole	-	µg/L	<0.5	<0.5		
Fenamiphos	-	µg/L	<0.01	<0.01		
Fenarimol	-	µg/L	<0.02	<0.02		
Fenchlorphos (Ronnel)	-	µg/L	<10	<10		
Fenitrothion	-	µg/L	<2	<2		
Fenoxycarb	-	µg/L	<0.1	<0.1		
Fensulfothion	-	µg/L	<0.01	<0.01		
Fenthion	-	µg/L	<0.05	<0.05		
Flamprop methyl	-	µg/L	<0.1	<0.1		
Fluometuron	-	µg/L	<0.01	<0.01		

	Description		
	Sampling Point	84513-Barossa Infrastucture Ltd - Fromms Square Williamstown	92112-Barossa Infrastructure
	Sample ID	*2024-004-5994	*2024-004-5993
	Sampled Date	12/07/2024 08:37	12/07/2024 09:58
	Collection Type	AWQC Collected	AWQC Collected

Parameter	LOR	Units	Result	Result		
Australian Laboratory Services Pty Ltd - New South Wales						
		Bottle Temp (°C):	*NA*	*NA*		
Multiresidue Pesticides Method: EP202LLEP206LLEP234 W09-023		*Tested Date:*				
Fluroxypyr	-	µg/L	<0.05	<0.05		
Flusilazole	-	µg/L	<0.02	<0.02		
Formothion	-	µg/L	<20	<20		
Fosetyl Aluminium	-	µg/L	<10	<10		
Haloxyfop	-	µg/L	<0.1	<0.1		
Hexaconazole	-	µg/L	<0.02	<0.02		
Hexazinone	-	µg/L	<0.02	<0.02		
Imazapyr	-	µg/L	<10.0	<10.0		
Imidacloprid	-	µg/L	<0.01	<0.01		
Indoxacarb	-	µg/L	<0.1	<0.1		
Iodosulfuron methyl	-	µg/L	<0.1	<0.1		
Irgarol	-	µg/L	<0.002	<0.002		
Isoproturon	-	µg/L	<0.1	<0.1		
Malathion	-	µg/L	<0.02	<0.02		
MCPA	-	µg/L	<0.01	<0.01		
MCPB	-	µg/L	<0.01	<0.01		
Mecoprop	-	µg/L	<0.01	<0.01		
Metalaxyl	-	µg/L	<0.1	<0.1		
Metalaxyl-M	-	µg/L	<0.1	<0.1		
Metaldehyde	-	µg/L	<10	<10		
Methidathion	-	µg/L	<0.1	<0.1		
Methiocarb	-	µg/L	<0.01	<0.01		
Methomyl	-	µg/L	<0.01	<0.01		
Metolachlor	-	µg/L	<0.01	<0.01		
Metribuzin	-	µg/L	<0.02	<0.02		
Metsulfuron Methyl	-	µg/L	<0.10	<0.10		
Mevinphos	-	µg/L	<0.02	<0.02		
Molinate	-	µg/L	<0.1	<0.1		
Monocrotophos	-	µg/L	<0.02	<0.02		
Myclobutanil	-	µg/L	<0.1	<0.1		
Naftalofos	-	µg/L	<1.0	<1.0		
Napropamide	-	µg/L	<0.1	<0.1		
Nitralin	-	µg/L	<0.1	<0.1		
Norflurazon	-	µg/L	<0.1	<0.1		
Novaluron	-	µg/L	<0.1	<0.1		
Omethoate	-	µg/L	<0.01	<0.01		
Oxamyl	-	µg/L	<0.01	<0.01		
Oxyfluorfen	-	µg/L	<1.0	<1.0		
Paclobutrazole	-	µg/L	<0.05	<0.05		

	Description		
	Sampling Point	84513-Barossa Infrastucture Ltd - Fromms Square Williamstown	92112-Barossa Infrastructure
	Sample ID	*2024-004-5994	*2024-004-5993
	Sampled Date	12/07/2024 08:37	12/07/2024 09:58
	Collection Type	AWQC Collected	AWQC Collected

Australian Laboratory Services Pty Ltd - New South Wales

Parameter	LOR	Units	Result	Result		
Bottle Temp (°C):			NA	NA		
Multiresidue Pesticides Method: EP202LLEP206LLEP234 W09-023						
Tested Date:						
Parathion	-	µg/L	<0.2	<0.2		
Parathion-methyl	-	µg/L	<0.5	<0.5		
Pebulate	-	µg/L	<0.1	<0.1		
Penconazole	-	µg/L	<0.01	<0.01		
Pendimethalin	-	µg/L	<0.05	<0.05		
Phorate	-	µg/L	<0.1	<0.1		
Picloram	-	µg/L	<0.05	<0.05		
Pirimicarb	-	µg/L	<0.1	<0.1		
Pirimiphos-ethyl	-	µg/L	<0.01	<0.01		
Pirimiphos-methyl	-	µg/L	<0.01	<0.01		
Prochloraz	-	µg/L	<0.1	<0.1		
Profenofos	-	µg/L	<0.01	<0.01		
Promecarb	-	µg/L	<0.1	<0.1		
Prometryn	-	µg/L	<0.01	<0.01		
Propachlor	-	µg/L	<0.1	<0.1		
Propamocarb	-	µg/L	<0.1	<0.1		
Propargite	-	µg/L	<0.1	<0.1		
Propazine	-	µg/L	<0.01	<0.01		
Propiconazole	-	µg/L	<0.05	<0.05		
Propyzamide	-	µg/L	<0.1	<0.1		
Prothiofos	-	µg/L	<0.1	<0.1		
Pyraclostrobin	-	µg/L	<0.1	<0.1		
Pyrazophos	-	µg/L	<0.1	<0.1		
Pyrimethanil	-	µg/L	<0.02	<0.02		
Pyriproxyfen	-	µg/L	<0.1	<0.1		
Pyroxsulam	-	µg/L	<0.1	<0.1		
Quinclorac	-	µg/L	<0.1	<0.1		
Rimsulfuron	-	µg/L	<0.1	<0.1		
Siduron	-	µg/L	<0.1	<0.1		
Silvex (2 4 5-TP/Fenoprop)	-	µg/L	<0.01	<0.01		
Simazine	-	µg/L	<0.02	<0.02		
Spirotetramat	-	µg/L	<0.1	<0.1		
Sulfotep	-	µg/L	<0.005	<0.005		
Sulprofos	-	µg/L	<0.05	<0.05		
Tebuconazole	-	µg/L	<0.01	<0.01		
Tebuthiuron	-	µg/L	<0.02	<0.02		
Temephos	-	µg/L	<0.02	<0.02		
Terbufos	-	µg/L	<0.01	<0.01		
Terbuthylazine	-	µg/L	<0.01	<0.01		

	Description		
	Sampling Point	84513-Barossa Infrastucture Ltd - Fromms Square Williamstown	92112-Barossa Infrastructure
	Sample ID	*2024-004-5994	*2024-004-5993
	Sampled Date	12/07/2024 08:37	12/07/2024 09:58
	Collection Type	AWQC Collected	AWQC Collected

Parameter	LOR	Units	Result	Result		
Australian Laboratory Services Pty Ltd - New South Wales						
		Bottle Temp (°C):	*NA*	*NA*		
Multiresidue Pesticides Method: EP202LLEP206LLEP234 W09-023						
		Tested Date:				
Terbutryn	-	µg/L	<0.01	<0.01		
Tetrachlorvinphos	-	µg/L	<0.01	<0.01		
Tetraconazole	-	µg/L	<0.1	<0.1		
Thiamethoxam	-	µg/L	<0.02	<0.02		
Thiobencarb	-	µg/L	<0.01	<0.01		
Thiodicarb	-	µg/L	<0.01	<0.01		
Thiometon	-	µg/L	<0.5	<0.5		
Toltrazuril	-	µg/L	<0.5	<0.5		
Triadimefon	-	µg/L	<0.1	<0.1		
Triadimenol	-	µg/L	<0.1	<0.1		
Triazophos	-	µg/L	<0.005	<0.005		
Trichlorfon	-	µg/L	<0.02	<0.02		
Trichloronate	-	µg/L	<0.5	<0.5		
Triclopyr	-	µg/L	<0.01	<0.01		
Trifloxystrobin	-	µg/L	<0.1	<0.1		
Trifloxysulfuron-sodium	-	µg/L	<0.1	<0.1		
Trifluralin	-	µg/L	<10.0	<10.0		
Trinexapac Ethyl	-	µg/L	<1	<1		
Vernolate	-	µg/L	<0.1	<0.1		
Bacteriology						
		Bottle Temp (°C):	*NA*	*NA*		
E.coli & Thermotolerant Coliforms Method: T0081-01 WMZ-500						
		Tested Date:	12/07/2024	12/07/2024		
E.coli	-	cfu/100mL	0	0		
Thermotolerant Coliforms	-	cfu/100mL	0	0		
Inorganic Chemistry - Metals						
		Bottle Temp (°C):	*NA*	*NA*		
Metals Method: TIC-006 W09-023						
		Tested Date:	15/07/2024	15/07/2024		
Aluminium - Total	0.001	mg/L	0.020	0.027		
Arsenic - Total	0.00006	mg/L	0.00035	0.00041		
Bismuth - Total	0.0001	mg/L	<0.0001	<0.0001		
Boron - Soluble	0.020	mg/L	0.056	0.059		
Cadmium - Total	0.0001	mg/L	<0.0001	<0.0001		
Calcium	0.05	mg/L	13.8	14.6		
Chromium - Total	0.0001	mg/L	<0.0001	<0.0001		
Cobalt - Total	0.0001	mg/L	<0.0001	<0.0001		
Copper - Total	0.0001	mg/L	0.0031	0.0037		

	Description		
	Sampling Point	84513-Barossa Infrastucture Ltd - Fromms Square Williamstown	92112-Barossa Infrastructure
	Sample ID	*2024-004-5994	*2024-004-5993
	Sampled Date	12/07/2024 08:37	12/07/2024 09:58
	Collection Type	AWQC Collected	AWQC Collected
Parameter	LOR Units	Result	Result
Inorganic Chemistry - Metals			
	Bottle Temp (°C):	*NA*	*NA*
Metals Method: TIC-006 W09-023			
	Tested Date:	15/07/2024	15/07/2024
Iron - Total	0.0005 mg/L	0.0125	0.0030
Lead - Total	0.0001 mg/L	<0.0001	<0.0001
Lithium - Total	0.0002 mg/L	0.0020	0.0020
Magnesium	0.05 mg/L	10.0	10.00
Manganese - Total	0.0001 mg/L	0.0088	0.0066
Mercury - Total	0.00003 mg/L	<0.00003	<0.00003
Molybdenum - Total	0.0001 mg/L	0.0003	0.0003
Nickel - Total	0.0002 mg/L	0.0006	0.0005
Potassium	0.05 mg/L	3.67	3.79
Selenium - Soluble	0.0001 mg/L	<0.0001	<0.0001
Sodium	0.1 mg/L	59.4	60.5
Sulphate	0.6 mg/L	42.6	43.2
Sulphur	0.2 mg/L	14.2	14.4
Uranium - Soluble	0.0001 mg/L	<0.0001	<0.0001
Vanadium - Soluble	0.0001 mg/L	0.0003	0.0004
Zinc - Total	0.0003 mg/L	0.0016	0.0028
Metals Method: TMZ-M06 W09-023			
	Tested Date:	12/07/2024	12/07/2024
Sodium Adsorption Ratio - Calculation	-	2.97	2.99
Total Hardness as CaCO3	2.0 mg/L	76	78
Inorganic Chemistry - Nutrients			
	Bottle Temp (°C):	*NA*	*NA*
Ammonia as N Method: T0100-01 W09-023			
	Tested Date:	17/07/2024	17/07/2024
Ammonia as N	0.005 mg/L	0.792	0.819
Chloride Method: T0104-02 W09-023			
	Tested Date:	16/07/2024	16/07/2024
Chloride	4.0 mg/L	90	89
Fluoride Method: T0105-01 W09-023			
	Tested Date:	15/07/2024	15/07/2024
Fluoride	0.10 mg/L	0.91	0.91
Nitrate + Nitrite as N Method: T0161-01 W09-023			
	Tested Date:	17/07/2024	17/07/2024
Nitrate + Nitrite as N	0.003 mg/L	0.083	0.051
Nitrogen - Total Method: TMZ-M06 W09-023			
	Tested Date:	12/07/2024	12/07/2024
Nitrogen - Total	- mg/L	0.85	0.93
Phosphorus - Total Method: T0109-01 W09-023			
	Tested Date:	18/07/2024	18/07/2024
Phosphorus - Total	0.005 mg/L	0.017	0.034

	Description		
	Sampling Point	84513-Barossa Infrastucture Ltd - Fromms Square Williamstown	92112-Barossa Infrastructure
	Sample ID	*2024-004-5994	*2024-004-5993
	Sampled Date	12/07/2024 08:37	12/07/2024 09:58
	Collection Type	AWQC Collected	AWQC Collected

Parameter	LOR	Units	Result	Result		
Inorganic Chemistry - Nutrients						
		Bottle Temp (°C):	*NA*	*NA*		
TKN as N Method: T0112-01 W09-023						
		Tested Date:	18/07/2024	18/07/2024		
TKN as Nitrogen	0.05	mg/L	0.77	0.88		
Inorganic Chemistry - Physical						
		Bottle Temp (°C):	*NA*	*NA*		
Alkalinity Carbonate Bicarbonate and Hydroxide Method: T0101-01 W09-023						
		Tested Date:	16/07/2024	16/07/2024		
Alkalinity as Calcium Carbonate	-	mg/L	60	61		
Bicarbonate	-	mg/L	70	68		
Carbonate	-	mg/L	2	3		
Hydroxide	-	mg/L	0	0		
Conductivity & Total Dissolved Solids Method: T0016-01 W09-023						
		Tested Date:	16/07/2024	16/07/2024		
Conductivity	2	µS/cm	520	518		
Note	-		Conductivity measurement is corrected to 25°C	Conductivity measurement is corrected to 25°C		
Total Dissolved Solids (by EC)	1	mg/L	288	287		
pH Method: T0010-01 W09-023						
		Tested Date:	16/07/2024	16/07/2024		
pH	-	pH units	8.3	8.4		
Temperature at which pH is measured	-	°C	22.1	21.9		
Turbidity Method: T0018-01 W09-023						
		Tested Date:	15/07/2024	15/07/2024		
Turbidity	0.1	NTU	0.27	0.13		
QLD Health Forensic & Scientific Services						
		Bottle Temp (°C):	*NA*	*NA*		
Uranium 238 Method: QIS32317 W09-023						
		Tested Date:				
# !External Lab Report No.	-		24PQ73	24PQ72		
# Uranium - 238	0.003	Bq/L	<0.003	<0.003		
Inorganic Chemistry - Radiation						
		Bottle Temp (°C):	*NA*	*NA*		
Gross Alpha and Beta Activity (K-40 Corrected) Method: TM493-03 W09-023						
		Tested Date:	12/07/2024	12/07/2024		
Gross Alpha Activity	-	Bq/L	<0.30	<0.26		
Gross Beta Activity (K-40 corrected)	-	Bq/L	<0.15	<0.14		
Sampling						
		Bottle Temp (°C):	*NA*	*NA*		

	Description		
	Sampling Point	84513-Barossa Infrastucture Ltd - Fromms Square Williamstown	92112-Barossa Infrastructure
	Sample ID	*2024-004-5994	*2024-004-5993
	Sampled Date	12/07/2024 08:37	12/07/2024 09:58
	Collection Type	AWQC Collected	AWQC Collected

Parameter	LOR	Units	Result	Result		
Sampling						
		Bottle Temp (°C):	*NA*	*NA*		
Chlorine Method: T0012-01 W09-023						
		Tested Date:	12/07/2024	12/07/2024		
Chlorine - Free	0.1	mg/L	<0.1	<0.1		
Chlorine - Total	0.1	mg/L	3.6	3.4		
Monochloramine	0.1	mg/L	3.6	3.4		
SGS Radiation Services (VIC)						
		Bottle Temp (°C):	*NA*	*NA*		
Radium 226 and 228 Method: ME-AU-ENV-NHRQUAS301 W09-023						
		Tested Date:				
# !External Lab Report No.	-		ME354524	ME354524		
Radium - 226	0.04	Bq/L	<0.04	<0.04		
Radium - 228	0.1	Bq/L	<0.1	<0.11		
Inorganic Chemistry - Waste Water						
		Bottle Temp (°C):	*NA*	*NA*		
Biochemical Oxygen Demand - Total Method: T0153-01 W09-023						
		Tested Date:	12/07/2024	12/07/2024		
Biochemical Oxygen Demand	2	mg/L	<2	<2		
Suspended Solids Method: T0160-01 W09-023						
		Tested Date:	24/07/2024	24/07/2024		
Suspended Solids	1.0	mg/L	<1	<1		

Analytical Methods

Analytical Method Code	Description	Reference Method
EP202LLEP206LLEP234	Phenoxy Acid Herbicides / Sulfonylurea Herbicides / Multiresidue Pesticides	
ME-AU-ENV-NHRQUAS301	ME-AU-ENV-NHR-QU-AS301-Measurement by high-resolution gamma ray spectrometry	
QIS32317	QIS32317 QHFSS in-house method	
T0010-01	Determination of pH	AP4500HB
T0012-01	Chlorine by classical and portable meter (field test)	AP4500CLF
T0016-01	Determination of Conductivity - Corrected to 25C	AP2510B
T0018-01	Turbidity - Nephelometric Measurement	APAWWA-WEF
T0081-01	E. coli - Membrane filtration	USEPA1604_1H
T0100-01	Ammonia/Ammonium - Automated Flow Colorimetry	AP4500NH3G
T0101-01	Alkalinity - Automated Acidimetric Titration	AP2320B
T0104-02	Chloride - Discrete Analyser	AP4500CLE
T0105-01	Fluoride by ISE	AP4500FC
T0109-01	Phosphorus - total by discrete analyser	AP4500PF
T0112-01	Nitrogen- Total Kjeldahl by discrete analyser	AP4500NORGA
T0153-01	Biochemical Oxygen Demand	AP5210B
T0160-01	Suspended Solids 103C to 105C	AP4500
T0161-01	Nitrate + Nitrate (NOx) - Automated Flow Colorimetry	AP4500NO3I
TIC-006	Elemental Analysis By ICP- MS	EPA200.8
TM493-03	TM493-03 Water quality - Gross alpha and gross beta activity - Test method using liquid scintillation counting	
TMZ-M06	Derived Results and Data Checks	
TMZ-M06	Derived Results and Data Checks	AP4500NORGA
TMZ-M06	Derived Results and Data Checks	APHA2340B
W-052	Preparation of Samples for Metal Analysis	AP3030AD

Sampling Methods

Sampling Method Code	Description
W09-023	Sampling Method for Chemical Analyses
WMZ-500	Sampling Method for Microbiological Analyses

Sampling Point and Sampled Date are provided when collected by customers. Validity of results are based on information and samples supplied by customers. Unless it is reported that sampling has been performed by AWQC , the samples have been analysed as received.

Laboratory Information

Laboratory	NATA accreditation ID
Australian Laboratory Services Pty Ltd - New South Wales	825,992
Bacteriology	1115
Customer Service Unit	-
Inorganic Chemistry - Metals	1115
Inorganic Chemistry - Nutrients	1115
Inorganic Chemistry - Physical	1115
Inorganic Chemistry - Radiation	1115
Inorganic Chemistry - Waste Water	1115
QLD Health Forensic & Scientific Services	41
Sampling	1115
SGS Radiation Services (VIC)	2562

Notes

1. The last figure of the result value is a significant figure.
2. # Indicates determination of the component is not covered by NATA Accreditation .
3. ^ Indicates result is out of specification according to the reference guideline.
4. * Indicates an incident has been recorded against the sample.
5. & Indicates the results have changed since the last issued report.
6. Where a result is required to meet compliance limits the associated measurement uncertainty must be considered. Measurement uncertainty is available at <https://www.awqc.com.au/our-services/Water-quality-testing-and-analysis/measurement-uncertainty>
7. Uncertainty of Measurement is reported with a coverage factor of 2 providing approximately 95% confidence interval
8. The Limit of Reporting (LOR) is the lowest concentration of analyte which is reported at the AWQC and is based on the LOQ rounded up to a more readily used value. The Limit of Quantitation (LOQ) is the lowest concentration of analyte for which quantitative results may be obtained within a specified degree of confidence.
9. Where collection type is AWQC Collect, NATA has confirmed that due to a robust system in place for maintaining the temperature integrity for samples collected by AWQC's Field Laboratory Services, the recording of temperature when samples arrive at the AWQC is out of scope .
10. If pH has been tested then the pH will be outside of its holding time unless measured in the field.
11. Radon-222 analysis. The result has been corrected for decay between sampling and counting date time.
12. Gross alpha activity is referenced to Th230 and traceable via NIST 4342A SRM
13. Gross beta activity is referenced to Sr90/Y90 and traceable via NIST 4919I SRM