



Environment and Heritage - Science, Economics and Insights

Environmental Forensics Report of Analysis

Project 20230171

Report #: 1683

Date Issued: 23-Jun-2023

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Client Project Reference: Menindee Fish Kill - 25 (13 May 202

Customer: Department of Planning & Environment

Attention: [Redacted]

Report Date: 23 June 2023

Project Received: 17 May 2023

EF Project Contact: [Redacted]

The following samples were analysed:

Sample ID	Client ID	Sample Type	Client Sampled Date/Time	Aliquot
233711	E8	Liquid	13/05/2023 9:00AM	
233718	E8	Liquid	13/05/2023 9:00AM	Field Aliquot
233719	E8	Liquid	13/05/2023 9:00AM	Field Aliquot
233720	E8	Liquid	13/05/2023 9:00AM	Field Aliquot
233721	E8	Liquid	13/05/2023 9:00AM	Field Aliquot
233722	E8	Liquid	13/05/2023 9:00AM	Field Aliquot
233723	E8	Liquid	13/05/2023 9:00AM	Field Aliquot
233724	E8	Liquid	13/05/2023 9:00AM	Field Aliquot
233725	E8	Liquid	13/05/2023 9:00AM	Field Aliquot
233712	E9	Liquid	13/05/2023 10:10AM	
233726	E9	Liquid	13/05/2023 10:10AM	Field Aliquot
233727	E9	Liquid	13/05/2023 10:10AM	Field Aliquot
233728	E9	Liquid	13/05/2023 10:10AM	Field Aliquot
233729	E9	Liquid	13/05/2023 10:10AM	Field Aliquot
233730	E9	Liquid	13/05/2023 10:10AM	Field Aliquot
233731	E9	Liquid	13/05/2023 10:10AM	Field Aliquot
233732	E9	Liquid	13/05/2023 10:10AM	Field Aliquot
233733	E9	Liquid	13/05/2023 10:10AM	Field Aliquot
233713	E10	Liquid	13/05/2023 11:05AM	
233734	E10	Liquid	13/05/2023 11:05AM	Field Aliquot
233735	E10	Liquid	13/05/2023 11:05AM	Field Aliquot
233736	E10	Liquid	13/05/2023 11:05AM	Field Aliquot
233737	E10	Liquid	13/05/2023 11:05AM	Field Aliquot
233738	E10	Liquid	13/05/2023 11:05AM	Field Aliquot
233739	E10	Liquid	13/05/2023 11:05AM	Field Aliquot
233740	E10	Liquid	13/05/2023 11:05AM	Field Aliquot
233741	E10	Liquid	13/05/2023 11:05AM	Field Aliquot
233714	B4	Liquid	13/05/2023 1:50PM	
233742	B4	Liquid	13/05/2023 1:50PM	Field Aliquot

Tests not covered by NATA accreditation 3040 are denoted with *

Codes: SN = Sample Note

RC = Project Comment



233743	B4	Liquid	13/05/2023	1:50PM	Field Aliquot
233744	B4	Liquid	13/05/2023	1:50PM	Field Aliquot
233745	B4	Liquid	13/05/2023	1:50PM	Field Aliquot
233746	B4	Liquid	13/05/2023	1:50PM	Field Aliquot
233747	B4	Liquid	13/05/2023	1:50PM	Field Aliquot
233748	B4	Liquid	13/05/2023	1:50PM	Field Aliquot
233749	B4	Liquid	13/05/2023	1:50PM	Field Aliquot
233715	E6	Liquid	13/05/2023	1:00PM	
233750	E6	Liquid	13/05/2023	1:00PM	Field Aliquot
233751	E6	Liquid	13/05/2023	1:00PM	Field Aliquot
233752	E6	Liquid	13/05/2023	1:00PM	Field Aliquot
233753	E6	Liquid	13/05/2023	1:00PM	Field Aliquot
233754	E6	Liquid	13/05/2023	1:00PM	Field Aliquot
233755	E6	Liquid	13/05/2023	1:00PM	Field Aliquot
233756	E6	Liquid	13/05/2023	1:00PM	Field Aliquot
233757	E6	Liquid	13/05/2023	1:00PM	Field Aliquot
233716	E6.5	Liquid	13/05/2023	2:30PM	
233758	E6.5	Liquid	13/05/2023	2:30PM	Field Aliquot
233759	E6.5	Liquid	13/05/2023	2:30PM	Field Aliquot
233760	E6.5	Liquid	13/05/2023	2:30PM	Field Aliquot
233761	E6.5	Liquid	13/05/2023	2:30PM	Field Aliquot
233762	E6.5	Liquid	13/05/2023	2:30PM	Field Aliquot
233763	E6.5	Liquid	13/05/2023	2:30PM	Field Aliquot
233764	E6.5	Liquid	13/05/2023	2:30PM	Field Aliquot
233765	E6.5	Liquid	13/05/2023	2:30PM	Field Aliquot
233717	E7	Liquid	13/05/2023	3:00PM	
233766	E7	Liquid	13/05/2023	3:00PM	Field Aliquot
233767	E7	Liquid	13/05/2023	3:00PM	Field Aliquot
233768	E7	Liquid	13/05/2023	3:00PM	Field Aliquot
233769	E7	Liquid	13/05/2023	3:00PM	Field Aliquot
233770	E7	Liquid	13/05/2023	3:00PM	Field Aliquot

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Codes: SN = Sample Note

RC = Project Comment

233771	E7	Liquid	13/05/2023	3:00PM	Field Aliquot
233772	E7	Liquid	13/05/2023	3:00PM	Field Aliquot
233773	E7	Liquid	13/05/2023	3:00PM	Field Aliquot

Report Notes

- This document has been authorised by the person whose name appears in this report.
- This report shall not be reproduced except in full. Samples analysed as received from the client.
- Results reported as 'less than' (<) indicates a result below the practical quantitation limit for the sample matrix and method used.

Project Comments

- Samples 233723 - 233725, 233731 - 233733, 233739 - 233741, 233747 - 233749, 233755 - 233757, 233763 - 233765 and 233771 - 233773 were sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of Nutrients: EK055G - Ammonia as N by Discrete Analyser, EK059G - Nitrite plus Nitrate as N (NOx) by Discrete Analyser, EK061F- Filtered Total Kjeldahl Nitrogen as N (TKN), EK061G - Total Kjeldahl Nitrogen By Discrete Analyser, EK062F - Filtered Total Nitrogen as N, EK062G - Total Nitrogen as N (TKN + NOx) by Discrete Analyser, EK067FG - Filtered Total Phosphorus as P by Discrete Analyser, EK067G - Total Phosphorus as P by Discrete Analyser, EK071G - Reactive Phosphorus as P by discrete analyser. This report summarises the Nutrients data from the attached external report: ES2316870, dated 25-May-2023.
- Sample 233711 to 233717 were also sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of EP202A: Phenoxycetic Acid Herbicides by LCMS and EP204: Glyphosate and AMPA. This report summarises the Pesticides data from the attached external report: ES2316870, dated 25-May-2023.
- Samples 233722, 233730, 233738, 233746, 233754, 233762 and 233770 were analysed outside the method holding time for Total suspended solids.
- Samples 233721, 233729, 233737, 233745, 233753, 233761 and 233769 were sent to Sydney Water Laboratory Services (NATA Accreditation no: 63 and 610) for the analysis of Blue-Green Algal ID and Enumeration. Please see detailed results in the attached Phytoplankton Analysis Report no. 285626 dated 3 June 2023.
- Samples 233719, 233727, 233735, 233743, 233751, 233759 and 233767 were sent to Sydney Water Laboratory Services (NATA Accreditation no: 63 and 610) for the analysis of Algal Toxins. Please the attached Analytical Report No: 285626 dated 3 June 2023, which gives Algal Toxins analysis results and the Blue-Green Algal ID and Enumeration summary results.

Analysis Results - External Methods*

Area - EXTERNAL

Analyte	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID																									
Algal Enumeration	-			233719	22/05/2023	E8	233721	22/05/2023	E8	233727	22/05/2023	E9	233729	22/05/2023	E9	233735	22/05/2023	E10	233737	22/05/2023	E10	233743	22/05/2023	B4	233745	22/05/2023	B4	233751	22/05/2023	E6	233753	22/05/2023	E6	233759	22/05/2023	E6.5	233761	22/05/2023	E6.5				
Algal Identification	-																																										
Algal Toxins	-																																										

Analysis Results - External Methods*

Area - EXTERNAL

Analyte	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID
Algal Enumeration	-			233767	22/05/2023	E7
Algal Identification	-					
Algal Toxins	-					

Analysis Results - External Methods*

Area - EXTERNAL

Analyte	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID																	
Ammonia as N				233723	19/05/2023	E8 - Filtered 1	0.03	233725	19/05/2023	E8 - Unfiltered	0.04	233731	19/05/2023	E9 - Filtered 1	0.04	233733	19/05/2023	E9 - Unfiltered	0.03	233739	19/05/2023	E10 - Filtered 1	0.03	233740	19/05/2023	E10 - Filtered 2	0.05	233741	19/05/2023	E10 - Unfiltered	0.06	233747	19/05/2023	B4 - Filtered 1	<0.01	233748	19/05/2023	B4 - Filtered 2	0.5	233749	19/05/2023	B4 - Unfiltered	0.5										
Dissolved TKN as N																																																					
Filtered Total Nitrogen as N																																																					
Filtered Total Phosphorus as P																																																					
Nitrite+Nitrate as N																																																					
Reactive Phosphorus as P																																																					
Total Kjeldahl Nitrogen as N																																																					
Total Nitrogen as N																																																					
Total Phosphorus as P																																																					

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Analysis Results - External Methods*

Area - EXTERNAL

Analyte	Sample ID Start Date Client ID	233755 19/05/2023 E6 - Filtered 1	233756 19/05/2023 E6 - Filtered 2	233757 19/05/2023 E6 - Unfiltered	233763 19/05/2023 E6.5 - Filtered 1	233764 19/05/2023 E6.5 - Filtered 2	233765 19/05/2023 E6.5 - Unfiltered	233771 19/05/2023 E7 - Filtered 1	233772 19/05/2023 E7 - Filtered 2	233773 19/05/2023 E7 - Unfiltered
Ammonia as N	mg/L	0.10				0.03		0.04		
Dissolved TKN as N	mg/L		0.8			0.6			0.7	
Filtered Total Nitrogen as N	mg/L		0.8			0.6			0.7	
Filtered Total Phosphorus as P	mg/L		0.20			0.25			0.21	
Nitrite+Nitrate as N	mg/L	0.01	0.01	0.02	<0.01	<0.01	0.01	<0.01	0.01	0.01
Reactive Phosphorus as P	mg/L	0.15			0.24			0.18		
Total Kjeldahl Nitrogen as N	mg/L			1.0			0.6			1.0
Total Nitrogen as N	mg/L			1.0			0.6			1.0
Total Phosphorus as P	mg/L			0.26			0.30			0.31

Analysis Results - External Methods*

Area - EXTERNAL

Analyte	Sample ID Start Date Client ID	233711 19/05/2023 E8	233712 19/05/2023 E9	233713 19/05/2023 E10	233714 19/05/2023 B4	233715 19/05/2023 E6	233716 19/05/2023 E6.5	233717 19/05/2023 E7
2,4,5-T	µg/L	<10	<10	<10	<10	<10	<10	<10
2,4,6-T	µg/L	<10	<10	<10	<10	<10	<10	<10
2,4-D	µg/L	<10	<10	<10	<10	<10	<10	<10
2,4-DB	µg/L	<10	<10	<10	<10	<10	<10	<10
2,4-DP	µg/L	<10	<10	<10	<10	<10	<10	<10
2,6-D	µg/L	<10	<10	<10	<10	<10	<10	<10
4-Chlorophenoxy acetic acid	µg/L	<10	<10	<10	<10	<10	<10	<10
AMPA	µg/L	<10	<10	<10	<10	<10	<10	<10
Clopyralid	µg/L	<10	<10	<10	<10	<10	<10	<10
Dicamba	µg/L	<10	<10	<10	<10	<10	<10	<10
Fluroxypyr	µg/L	<10	<10	<10	<10	<10	<10	<10
Glyphosate	µg/L	<10	<10	<10	<10	<10	<10	<10
MCPA	µg/L	<10	<10	<10	<10	<10	<10	<10
MCPB	µg/L	<10	<10	<10	<10	<10	<10	<10
Mecoprop	µg/L	<10	<10	<10	<10	<10	<10	<10
Picloram	µg/L	<10	<10	<10	<10	<10	<10	<10
Silvex (2,4,5-TP/Fenoprop)	µg/L	<10	<10	<10	<10	<10	<10	<10
Triclopyr	µg/L	<10	<10	<10	<10	<10	<10	<10

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Analysis Results - ICVAASW
Area - INORGANIC

Analyte	µg/L	233720 19/05/2023 E8	233728 19/05/2023 E9	233736 19/05/2023 E10	233744 19/05/2023 B4	233752 19/05/2023 E6	233760 19/05/2023 E6.5	233768 19/05/2023 E7
Mercury		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Analysis Results - ICPAES
Area - INORGANIC

Analyte	mg/L	233720 18/05/2023 E8	233728 18/05/2023 E9	233736 18/05/2023 E10	233744 18/05/2023 B4	233752 18/05/2023 E6	233760 18/05/2023 E6.5	233768 18/05/2023 E7
Aluminium (Lab. filtered)		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Barium (Lab. filtered)		0.11	0.10	0.10	0.10	0.10	0.10	0.10
Boron (Lab. filtered)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Calcium (Lab. filtered)		33	31	30	32	33	32	33
Iron (Lab. filtered)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Magnesium (Lab. filtered)		14	14	15	13	13	13	14
Potassium (Lab. filtered)		12	12	12	12	13	12	13
Sodium (Lab. filtered)		41	42	45	40	41	40	43
Strontium (Lab. filtered)		0.36	0.35	0.35	0.34	0.36	0.35	0.36
Sulfur (Lab. filtered)		3.4	3.2	3.0	4.0	4.0	4.0	4.0
Titanium (Lab. filtered)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

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Analysis Results - ICPMS
Area - INORGANIC

Analyte	Sample ID Start Date Client ID	233720 18/05/2023 E8	233728 18/05/2023 E9	233736 18/05/2023 E10	233744 18/05/2023 B4	233752 18/05/2023 E6	233760 18/05/2023 E6.5	233768 18/05/2023 E7
Antimony (Lab. filtered)	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic (Lab. filtered)	mg/L	0.004	0.005	0.005	0.006	0.006	0.006	0.007
Beryllium (Lab. filtered)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cadmium (Lab. filtered)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium (Lab. filtered)	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt (Lab. filtered)	mg/L	0.0002	0.0002	0.0003	<0.0001	0.0002	0.0001	0.0002
Copper (Lab. filtered)	mg/L	0.0022	0.0023	0.0021	0.0025	0.0022	0.0024	0.0020
Lead (Lab. filtered)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium (Lab. filtered)	mg/L	0.0020	0.0020	0.0021	0.0023	0.0023	0.0023	0.0025
Manganese (Lab. filtered)	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum (Lab. filtered)	mg/L	0.0013	0.0013	0.0013	0.0013	0.0014	0.0013	0.0013
Nickel (Lab. filtered)	mg/L	0.0028	0.0029	0.0031	0.0021	0.0023	0.0023	0.0021
Selenium (Lab. filtered)	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silver (Lab. filtered)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Thallium (Lab. filtered)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin (Lab. filtered)	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	0.0005	<0.0002	<0.0002
Vanadium (Lab. filtered)	mg/L	0.013	0.013	0.012	0.019	0.021	0.021	0.022
Zinc (Lab. filtered)	mg/L	<0.001	<0.001	<0.001	0.002	0.002	0.002	0.001

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Analysis Results - ICPAES
Area - INORGANIC

Analyte	Sample ID	Start Date	Client ID	233720	233728	233736	233744	233752	233760	233768
		19/05/2023		19/05/2023	19/05/2023	19/05/2023	19/05/2023	19/05/2023	19/05/2023	19/05/2023
		E8	E9	E10	B4	E6	E6.5	E7		
Aluminium (acid extractable)		6.4	6.3	6.5	2.7	3.4	3.0	5.0		
Barium (acid extractable)		0.14	0.14	0.14	0.12	0.13	0.12	0.13		
Boron (acid extractable)		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		
Calcium (acid extractable)		35	34	33	33	35	35	37		
Iron (acid extractable)		4.5	4.7	5.1	1.9	2.5	2.1	3.6		
Magnesium (acid extractable)		16	16	17	14	15	14	15		
Manganese (acid extractable)		0.11	0.13	0.16		0.05	0.03	0.08		
Potassium (acid extractable)		14	14	14	14	14	14	15		
Sodium (acid extractable)		44	44	47	41	43	42	44		
Strontium (acid extractable)		0.40	0.39	0.40	0.36	0.39	0.38	0.40		
Sulfur (acid extractable)		3.6	3.4	3.2	4.1	4.3	4.2	4.3		
Titanium (acid extractable)		0.12	0.09	0.07	0.05	0.04	0.05	0.07		

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Analysis Results - ICPMS
Area - INORGANIC

Analyte	Sample ID Start Date Client ID	233720 19/05/2023 E8	233728 19/05/2023 E9	233736 19/05/2023 E10	233744 19/05/2023 B4	233752 19/05/2023 E6	233760 19/05/2023 E6.5	233768 19/05/2023 E7
Antimony (acid extractable)	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic (acid extractable)	mg/L	0.005	0.005	0.005	0.006	0.006	0.006	0.007
Beryllium (acid extractable)	mg/L	0.0001	0.0002	0.0002	<0.0001	<0.0001	<0.0001	0.0001
Cadmium (acid extractable)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium (acid extractable)	mg/L	0.006	0.007	0.006	0.002	0.003	0.003	0.004
Cobalt (acid extractable)	mg/L	0.0018	0.0020	0.0024	0.0005	0.0009	0.0007	0.0014
Copper (acid extractable)	mg/L	0.0054	0.0052	0.0052	0.0036	0.0041	0.0043	0.0046
Lead (acid extractable)	mg/L	0.0012	0.0014	0.0015	0.0004	0.0006	0.0005	0.0011
Lithium (acid extractable)	mg/L	0.0030	0.0032	0.0034	0.0026	0.0027	0.0026	0.0032
Manganese (acid extractable)	mg/L			0.015				
Molybdenum (acid extractable)	mg/L	0.0013	0.0013	0.0013	0.0013	0.0014	0.0013	0.0013
Nickel (acid extractable)	mg/L	0.0067	0.0069	0.0070	0.0035	0.0041	0.0039	0.0051
Selenium (acid extractable)	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silver (acid extractable)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Thallium (acid extractable)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin (acid extractable)	mg/L	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002
Vanadium (acid extractable)	mg/L	0.021	0.022	0.023	0.022	0.025	0.025	0.028
Zinc (acid extractable)	mg/L	0.010	0.009	0.010	0.004	0.006	0.005	0.009

Analysis Results - IGR TSS
Area - INORGANIC

Analyte	Sample ID Start Date Client ID	233722 24/05/2023 E8	233730 24/05/2023 E9	233738 24/05/2023 E10	233746 24/05/2023 B4	233754 24/05/2023 E6	233762 24/05/2023 E6.5	233770 24/05/2023 E7
Fixed Suspended Solids	mg/L	50	51	64	6	41	19	57
Total Suspended Solids	mg/L	58	59	76	8	49	23	69
Volatile Suspended Solids	mg/L	8	9	12	<3	8	4	12

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Analysis Results - QQPEST
Area - ORGANIC

Analyte	Sample ID Start Date Client ID	233718 19/05/2023 E8	233726 19/05/2023 E9	233734 19/05/2023 E10	233742 19/05/2023 B4	233750 19/05/2023 E6	233758 19/05/2023 E6.5	233766 19/05/2023 E7
Aldrin	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Allethrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Alpha-Chlordane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
alpha-HCH	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Amethyn	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Atraton	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Atrazine	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
beta-HCH	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bifenthrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bioresmethrin	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carbophenothion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Cis-permethrin	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Crotoxypfos	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cyfluthrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cypermethrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
delta-HCH	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Deltamethrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorvos	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Dieldrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endosulfan II	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Endosulfan I	µg/L	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9
Endosulfan Sulfate	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Endrin Aldehyde	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endrin Ketone	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenampthos	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenithion	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4

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Analysis Results - QQPEST
Area - ORGANIC

Analyte	Sample ID Start Date Client ID	233718 19/05/2023 E8	233726 19/05/2023 E9	233734 19/05/2023 E10	233742 19/05/2023 B4	233750 19/05/2023 E6	233758 19/05/2023 E6.5	233766 19/05/2023 E7
Fenvalerate	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Gamma-Chlordane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
gamma-HCH	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Heptachlor Epoxide	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Heptachlor	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Hexachlorobenzene	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Hexazinone	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
L-cyhalothrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Malathion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methidathion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl Azinphos	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Methyl Chlorpyrifos	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Methyl Parathion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mevinphos	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Oxyfluorfen	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Parathion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phorate	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Profenofos	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Prometon	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Promethyn	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Propagite	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Propazine	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Propelamphos	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Simazine	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Simethyn	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulprofos	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Tebuconazole	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tebuthiuron	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Terbutylazine	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Terbutyn	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachlorvinphos	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trans-permethrin	µg/L	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7

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Sample ID	Client ID	Method	Start Date	Result
233718	E8	OLSCAN* - LC/MS Scan	19/05/2023	LC/MS scan for approximately 600 pesticides was negative. A list of analysed compounds can be provided on request. Note the list doesn't include glyphosate and quaternary ammonium herbicides (e.g. Paraquat and Diquat).
233726	E9	OLSCAN* - LC/MS Scan	19/05/2023	LC/MS scan for approximately 600 pesticides was negative. A list of analysed compounds can be provided on request. Note the list doesn't include glyphosate and quaternary ammonium herbicides (e.g. Paraquat and Diquat).
233734	E10	OLSCAN* - LC/MS Scan	19/05/2023	LC/MS scan for approximately 600 pesticides was negative. A list of analysed compounds can be provided on request. Note the list doesn't include glyphosate and quaternary ammonium herbicides (e.g. Paraquat and Diquat).
233742	B4	OLSCAN* - LC/MS Scan	19/05/2023	LC/MS scan for approximately 600 pesticides was negative. A list of analysed compounds can be provided on request. Note the list doesn't include glyphosate and quaternary ammonium herbicides (e.g. Paraquat and Diquat).
233750	E6	OLSCAN* - LC/MS Scan	19/05/2023	LC/MS scan for approximately 600 pesticides was negative. A list of analysed compounds can be provided on request. Note the list doesn't include glyphosate and quaternary ammonium herbicides (e.g. Paraquat and Diquat).
233758	E6.5	OLSCAN* - LC/MS Scan	19/05/2023	LC/MS scan for approximately 600 pesticides was negative. A list of analysed compounds can be provided on request. Note the list doesn't include glyphosate and quaternary ammonium herbicides (e.g. Paraquat and Diquat).
233766	E7	OLSCAN* - LC/MS Scan	19/05/2023	LC/MS scan for approximately 600 pesticides was negative. A list of analysed compounds can be provided on request. Note the list doesn't include glyphosate and quaternary ammonium herbicides (e.g. Paraquat and Diquat).

The sample(s) referred to in this report were analysed by the following method(s):

Method code	Method description	Area
External Methods*	External Methods - Analysis completed externally	EXTERNAL
External Methods*	External Methods - Analysis completed externally	EXTERNAL
External Methods*	External Methods - Analysis completed externally	EXTERNAL
ICVAASW	Mercury by Cold Vapour Atomic Absorption Spectroscopy	INORGANIC
ICPAES	Dissolved element analysis by Inductively Coupled Plasma-Atomic Emission Spectrometry (ICPAES)	INORGANIC
ICPMS	Dissolved Metals by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)	INORGANIC
ICPAES	Acid extractable element analysis by Inductively Coupled Plasma-Atomic Emission Spectrometry (ICPAES)	INORGANIC
ICPMS	Acid extractable Metals by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)	INORGANIC
IGRTSS	Total Suspended Solids (TSS) (includes Volatile and Fixed Suspended Solids)	INORGANIC
QQQPEST	Determination of Multiresidue Pesticides by GCMSMS	ORGANIC
OLSCAN*	Qualitative LC/MS scan	ORGANIC

The results in this report were authorised by:

Name	Title	Area
	Senior Scientist	EXTERNAL
	Scientist	INORGANIC
	Scientist	ORGANIC

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