



## Environmental Forensics Report of Analysis

Project 20230158

Report #:

1665

Date Issued:

07-Jun-2023

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**Client Project Reference: Menindee Fish Kill - 22 (IMT 10 May**

Customer: Department of Planning & Environment

Attention:

[Redacted]

EF Project Contact:

[Redacted]

[Redacted]

[Redacted]

Report Date: 07 June 2023

Project Received: 12 May 2023

**The following samples were analysed:**

Sample ID	Client ID	Sample Type	Client Sampled Date/Time	Aliquot	Client Description
233216	E6	Liquid	10/05/2023 1:30PM		
233223	E6	Liquid	10/05/2023 1:30PM	Field Aliquot	
233224	E6	Liquid	10/05/2023 1:30PM	Field Aliquot	
233225	E6	Liquid	10/05/2023 1:30PM	Field Aliquot	
233226	E6	Liquid	10/05/2023 1:30PM	Field Aliquot	
233227	E6	Liquid	10/05/2023 1:30PM	Field Aliquot	Filtered 1
233228	E6	Liquid	10/05/2023 1:30PM	Field Aliquot	Filtered 2
233229	E6	Liquid	10/05/2023 1:30PM	Field Aliquot	Unfiltered
233217	E6.5	Liquid	10/05/2023 2:20PM		
233230	E6.5	Liquid	10/05/2023 2:20PM	Field Aliquot	
233231	E6.5	Liquid	10/05/2023 2:20PM	Field Aliquot	
233232	E6.5	Liquid	10/05/2023 2:20PM	Field Aliquot	
233233	E6.5	Liquid	10/05/2023 2:20PM	Field Aliquot	
233234	E6.5	Liquid	10/05/2023 2:20PM	Field Aliquot	Filtered 1
233235	E6.5	Liquid	10/05/2023 2:20PM	Field Aliquot	Filtered 2
233236	E6.5	Liquid	10/05/2023 2:20PM	Field Aliquot	Unfiltered
233218	E7	Liquid	10/05/2023 3:00PM		
233237	E7	Liquid	10/05/2023 3:00PM	Field Aliquot	
233238	E7	Liquid	10/05/2023 3:00PM	Field Aliquot	
233239	E7	Liquid	10/05/2023 3:00PM	Field Aliquot	
233240	E7	Liquid	10/05/2023 3:00PM	Field Aliquot	
233241	E7	Liquid	10/05/2023 3:00PM	Field Aliquot	Filtered 1
233242	E7	Liquid	10/05/2023 3:00PM	Field Aliquot	Filtered 2
233243	E7	Liquid	10/05/2023 3:00PM	Field Aliquot	Unfiltered
233219	E8	Liquid	10/05/2023 9:15AM		
233244	E8	Liquid	10/05/2023 9:15AM	Laboratory Aliquot	
233245	E8	Liquid	10/05/2023 9:15AM	Field Aliquot	
233246	E8	Liquid	10/05/2023 9:15AM	Field Aliquot	
233247	E8	Liquid	10/05/2023 9:15AM	Field Aliquot	

Tests not covered by NATA accreditation 3040 are denoted with \*

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233248	E8	Liquid	10/05/2023	9:15AM	Field Aliquot	Filtered 1
233249	E8	Liquid	10/05/2023	9:15AM	Field Aliquot	Filtered 2
233250	E8	Liquid	10/05/2023	9:15AM	Field Aliquot	Unfiltered
234010	E8	Liquid	10/05/2023	9:15AM	Field Aliquot	
233220	E9	Liquid	10/05/2023	10:15AM		
233251	E9	Liquid	10/05/2023	10:15AM	Field Aliquot	
233252	E9	Liquid	10/05/2023	10:15AM	Field Aliquot	
233253	E9	Liquid	10/05/2023	10:15AM	Field Aliquot	
233254	E9	Liquid	10/05/2023	10:15AM	Field Aliquot	
233255	E9	Liquid	10/05/2023	10:15AM	Field Aliquot	Filtered 1
233256	E9	Liquid	10/05/2023	10:15AM	Field Aliquot	Filtered 2
233257	E9	Liquid	10/05/2023	10:15AM	Field Aliquot	Unfiltered
233221	E10	Liquid	10/05/2023	11:05AM		
233258	E10	Liquid	10/05/2023	11:05AM	Field Aliquot	
233259	E10	Liquid	10/05/2023	11:05AM	Field Aliquot	
233260	E10	Liquid	10/05/2023	11:05AM	Field Aliquot	
233261	E10	Liquid	10/05/2023	11:05AM	Field Aliquot	
233262	E10	Liquid	10/05/2023	11:05AM	Field Aliquot	Filtered 1
233263	E10	Liquid	10/05/2023	11:05AM	Field Aliquot	Filtered 2
233264	E10	Liquid	10/05/2023	11:05AM	Field Aliquot	Unfiltered
233222	B4	Liquid	10/05/2023	12:30PM		
233265	B4	Liquid	10/05/2023	12:30PM	Field Aliquot	
233266	B4	Liquid	10/05/2023	12:30PM	Field Aliquot	
233267	B4	Liquid	10/05/2023	12:30PM	Field Aliquot	
233268	B4	Liquid	10/05/2023	12:30PM	Field Aliquot	
233269	B4	Liquid	10/05/2023	12:30PM	Field Aliquot	Filtered 1
233270	B4	Liquid	10/05/2023	12:30PM	Field Aliquot	Filtered 2
233271	B4	Liquid	10/05/2023	12:30PM	Field Aliquot	Unfiltered
233318	E6	Liquid	10/05/2023			
233319	E6.5	Liquid	10/05/2023			
233320	E7	Liquid	10/05/2023			

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233321	E8	Liquid	10/05/2023
233322	E9	Liquid	10/05/2023
233323	E10	Liquid	10/05/2023
233324	B4	Liquid	10/05/2023

#### 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 233223, 233230, 233237, 233244, 233251, 233258 and 233265 were sent to ALS Environmental Laboratory (NATA Accreditation no. 825) for the analysis of Pesticides: EP202A - Phenoxyacetic Acid Herbicides by LCMS, and EP204 - Glyphosate and AMPA by LCMS. This report summarises Pesticides data from the attached external report ES2316256, dated 24-May-2023.
- Samples 233227 - 233229; 233234 - 233236; 233241 - 233243; 233248 - 233250; 233255 - 233257; 233262 - 233264 and 233269 - 233271 were also 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, EK061G - Total Kjeldahl Nitrogen By Discrete Analyser, EK062G - Total Nitrogen as N (TKN + NOx) by Discrete Analyser, EK067G - Total Phosphorus as P by Discrete Analyser, EK071G - Reactive Phosphorus as P by discrete analyser This report also summarises the Nutrients data from the attached external report ES2316256, dated 24-May-2023.
- Samples 233225, 233232, 233239, 233246, 233253, 233260, 233267 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. 285353 dated 30 May 2023.
- Samples 233224, 233231, 233238, 233245, 233252, 233259, 233266 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: 285353 dated 30 May 2023, which gives Algal Toxins analysis results and the Blue-Green Algal ID and Enumeration summary results.
- Samples 233318, 233319, 233320, 233321, 233322, 233323 and 233324 were analysed outside the method holding time for Total Suspended Solids.

**Analysis Results - External Methods\***

**Area - EXTERNAL**

Analyte	Sample ID	Start Date	Client ID	233224	233225	233231	233232	233238	233239	233245	233246	233252	233253	233259	233260
				16/05/2023	29/05/2023	16/05/2023	29/05/2023	16/05/2023	29/05/2023	16/05/2023	29/05/2023	16/05/2023	29/05/2023	16/05/2023	29/05/2023
				E6	E6	E6.5	E6.5	E7	E7	E8	E8	E9	E9	E10	E10
Algal Enumeration	-				RC		RC		RC		RC		RC		RC
Algal Identification	-				RC		RC		RC		RC		RC		RC
Algal Toxins	-							RC						RC	

**Analysis Results - External Methods\***

**Area - EXTERNAL**

Analyte	Sample ID	Start Date	Client ID	233266	233267
				16/05/2023	29/05/2023
				B4	B4
Algal Enumeration	-				RC
Algal Identification	-				RC
Algal Toxins	-			RC	

**Analysis Results - External Methods\***

**Area - EXTERNAL**

Analyte	Sample ID	Start Date	Client ID	233227	233228	233229	233234	233235	233236	233241	233242	233243	233248	233249	233250
				17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023
				E6	E6	E6	E6.5	E6.5	E6.5	E7	E7	E7	E8	E8	E8
Ammonia as N				1.01			<0.01			0.04					
Nitrite+Nitrate as N				0.02	0.05	0.09	0.01	0.04	0.06	0.01	0.09	0.05			0.10
Reactive Phosphorus as P				0.18			0.23			0.17			0.13		
Total Kjeldahl Nitrogen as N				1.0	1.0	1.2	0.6	0.6	0.7		0.7	1.3		0.7	1.0
Total Nitrogen as N				1.0	1.0	1.3	0.6	0.6	0.8		0.8	1.4		0.8	1.1
Total Phosphorus as P				0.25	0.25	0.30	0.26	0.26	0.32		0.21	0.36		0.17	0.29

**Analysis Results - External Methods\***

**Area - EXTERNAL**

Analyte	Sample ID	Start Date	Client ID	233255	233256	233257	233262	233263	233264	233269	233270	233271
				17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023
				E9	E9	E9	E10	E10	E10	B4	B4	B4
Ammonia as N				0.05			0.01			<0.01		
Nitrite+Nitrate as N				0.04	0.14	0.09	0.05	0.08	0.08	<0.01	0.05	0.04
Reactive Phosphorus as P				0.12			0.08			0.23		
Total Kjeldahl Nitrogen as N					0.7	1.3		0.9	1.4		0.6	0.7
Total Nitrogen as N					0.8	1.4		1.0	1.5		0.6	0.7
Total Phosphorus as P					0.17	0.29		0.12	0.28		0.28	0.32

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**Analysis Results - External Methods\***

**Area - EXTERNAL**

Analyte	Sample ID	Start Date	Client ID	233223 17/05/2023 E6	233230 17/05/2023 E6.5	233237 17/05/2023 E7	233244 17/05/2023 E8	233251 17/05/2023 E9	233258 17/05/2023 E10	233265 17/05/2023 B4
				<10	<10	<10	<10	<10	<10	<10
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/F-enoprop)			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	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID
Mercury				233226	16/05/2023	E6	233233	16/05/2023	E6.5
							233240	16/05/2023	E7
							233247	16/05/2023	E8
							233254	16/05/2023	E9
							233261	16/05/2023	E10
							233268	16/05/2023	B4

**Analysis Results - ICPAES**  
**Area - INORGANIC**

Analyte	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID	Sample ID	Start Date	Client ID
Aluminium (Lab. filtered)				233226	15/05/2023	E6	233233	15/05/2023	E6.5
Barium (Lab. filtered)							233240	15/05/2023	E7
Boron (Lab. filtered)							233247	15/05/2023	E8
Calcium (Lab. filtered)							233254	15/05/2023	E9
Iron (Lab. filtered)							233261	15/05/2023	E10
Magnesium (Lab. filtered)							233268	15/05/2023	B4
Potassium (Lab. filtered)									
Sodium (Lab. filtered)									
Strontium (Lab. filtered)									
Sulfur (Lab. filtered)									
Titanium (Lab. filtered)									

**Analysis Results - ICPMS**  
**Area - INORGANIC**

Analyte	Sample ID Start Date Client ID	233226 15/05/2023 E6	233233 15/05/2023 E6.5	233240 15/05/2023 E7	233247 15/05/2023 E8	233254 15/05/2023 E9	233261 15/05/2023 E10	233268 15/05/2023 B4
Antimony (Lab. filtered)	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic (Lab. filtered)	mg/L	0.006	0.007	0.005	0.005	0.005	0.004	0.006
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	0.0002	0.0002	0.0002	0.0003	<0.0001
Copper (Lab. filtered)	mg/L	0.0021	0.0018	0.0022	0.0022	0.0023	0.0020	0.0024
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	0.0021	0.0021	0.0016	0.0017	0.0019	0.0019
Manganese (Lab. filtered)	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum (Lab. filtered)	mg/L	0.0014	0.0014	0.0013	0.0013	0.0013	0.0013	0.0014
Nickel (Lab. filtered)	mg/L	0.0022	0.0020	0.0020	0.0027	0.0029	0.0032	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	<0.0002	<0.0002	<0.0002
Vanadium (Lab. filtered)	mg/L	0.017	0.020	0.012	0.012	0.012	0.010	0.019
Zinc (Lab. filtered)	mg/L	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

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**Analysis Results - ICPAES**  
**Area - INORGANIC**

Analyte	Sample ID	Start Date	Client ID	233226	233233	233240	233247	233254	233261	233268
				15/05/2023	15/05/2023	15/05/2023	15/05/2023	15/05/2023	15/05/2023	15/05/2023
				E6	E6.5	E7	E8	E9	E10	B4
Aluminium (acid extractable)				4.1	2.5	4.2	5.1	5.0	4.2	3.1
Barium (acid extractable)				0.13	0.12	0.12	0.13	0.13	0.14	0.12
Boron (acid extractable)				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Calcium (acid extractable)				36	35	36	35	34	35	35
Iron (acid extractable)				3.2	1.9	3.2	4.2	4.1	3.4	2.4
Magnesium (acid extractable)				15	14	15	16	16	17	14
Manganese (acid extractable)				0.08	0.02	0.09	0.10	0.11	0.14	0.03
Potassium (acid extractable)				13	12	13	12	12	13	13
Sodium (acid extractable)				41	40	43	41	42	48	39
Strontium (acid extractable)				0.39	0.36	0.39	0.38	0.38	0.40	0.36
Sulfur (acid extractable)				4.4	4.3	4.4	3.5	3.5	3.5	4.2
Titanium (acid extractable)				0.03	0.03	0.04	0.05	0.04	0.03	0.03

**Analysis Results - ICPMS**  
**Area - INORGANIC**

Analyte	Sample ID Start Date Client ID	233226 15/05/2023 E6	233233 15/05/2023 E6.5	233240 15/05/2023 E7	233247 15/05/2023 E8	233254 15/05/2023 E9	233261 15/05/2023 E10	233268 15/05/2023 B4
Antimony (acid extractable)	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic (acid extractable)	mg/L	0.006	0.006	0.007	0.005	0.005	0.005	0.006
Beryllium (acid extractable)	mg/L	0.0001	<0.0001	0.0001	0.0002	0.0002	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	0.004	0.003	0.005	0.006	0.006	0.004	0.003
Cobalt (acid extractable)	mg/L	0.0014	0.0007	0.0017	0.0017	0.0020	0.0019	0.0008
Copper (acid extractable)	mg/L	0.0050	0.0040	0.0047	0.0050	0.0050	0.0043	0.0045
Lead (acid extractable)	mg/L	0.0010	0.0005	0.0012	0.0013	0.0014	0.0012	0.0006
Lithium (acid extractable)	mg/L	0.0035	0.0030	0.0035	0.0032	0.0033	0.0031	0.0030
Molybdenum (acid extractable)	mg/L	0.0014	0.0014	0.0015	0.0013	0.0013	0.0013	0.0014
Nickel (acid extractable)	mg/L	0.0051	0.0050	0.0051	0.0064	0.0067	0.0060	0.0044
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	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002
Vanadium (acid extractable)	mg/L	0.024	0.025	0.030	0.021	0.022	0.019	0.025
Zinc (acid extractable)	mg/L	0.008	0.006	0.009	0.009	0.010	0.007	0.011

**Analysis Results - IGRSS**  
**Area - INORGANIC**

Analyte	Sample ID Start Date Client ID	233318 19/05/2023 E6	233319 19/05/2023 E6.5	233320 19/05/2023 E7	233321 19/05/2023 E8	233322 19/05/2023 E9	233323 19/05/2023 E10	233324 19/05/2023 B4
Fixed Suspended Solids	mg/L	66	14	51	40	48	51	18
Total Suspended Solids	mg/L	76	18	62	47	57	62	22
Volatile Suspended Solids	mg/L	10	4	11	7	9	11	4

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**Analysis Results - QQPEST**  
**Area - ORGANIC**

Analyte	Sample ID Start Date Client ID	233216 16/05/2023 E6	233217 16/05/2023 E6.5	233218 16/05/2023 E7	233219 16/05/2023 E8	233220 16/05/2023 E9	233221 16/05/2023 E10	233222 16/05/2023 B4
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
Anetryn	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
Bioremethrin	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
Crotoxyphos	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
Fenamiphos	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
Fenitrothion	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	233216 16/05/2023 E6	233217 16/05/2023 E6.5	233218 16/05/2023 E7	233219 16/05/2023 E8	233220 16/05/2023 E9	233221 16/05/2023 E10	233222 16/05/2023 B4
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
Prometryn	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Propargile	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
Propetamphos	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
Simetryn	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
Terbutryn	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachlorinphos	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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**Area - ORGANIC**

Sample ID	Client ID	Method	Start Date	Result
233216	E6	OLCSCAN* - LC/MS Scan	17/05/2023	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).
233217	E6.5	OLCSCAN* - LC/MS Scan	17/05/2023	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).
233218	E7	OLCSCAN* - LC/MS Scan	17/05/2023	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).
233219	E8	OLCSCAN* - LC/MS Scan	17/05/2023	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).
233220	E9	OLCSCAN* - LC/MS Scan	17/05/2023	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).
233221	E10	OLCSCAN* - LC/MS Scan	17/05/2023	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).
233222	B4	OLCSCAN* - LC/MS Scan	17/05/2023	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).

**Area - OTHER**

Sample ID	Client ID	Method	Start Date	Result
234010	E8	Hold* - Hold	12/05/2023	Sample is on hold for analysis if required.

**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
QQPEST	Determination of Multiresidue Pesticides by GCMSMS	ORGANIC
OLSCAN*	Qualitative LC/MS scan	ORGANIC
Hold*	Sample held pending further requests for analysis	OTHER

**The results in this report were authorised by:**

Name	Title	Area
[REDACTED]	Senior Scientist	EXTERNAL
[REDACTED]	Scientist	INORGANIC
[REDACTED]	Scientist	ORGANIC
[REDACTED]	Senior Scientist	OTHER

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