



Environmental Forensics Report of Analysis
Project 20230320

Report #: 1839
Date Issued: 04-Sep-2023
Page 1 of 16

Client Project Reference: Darling-Barka River Health Project2

Customer: Department of Planning & Environment

Attention: [REDACTED]

Report Date: 04 September 2023

Project Received: 04 August 2023

EF Project Contact: [REDACTED]
[REDACTED]
[REDACTED]



The following samples were analysed:

Sample ID	Client ID	Sample Type	Client Sampled Date/Time	Aliquot	Client Description
237160	B1	Liquid	01/08/2023 10:15AM		
237168	B1	Liquid	01/08/2023 10:15AM	Field Aliquot	
237169	B1	Liquid	01/08/2023 10:15AM	Field Aliquot	
237170	B1	Liquid	01/08/2023 10:15AM	Field Aliquot	
237171	B1	Liquid	01/08/2023 10:15AM	Field Aliquot	
237161	B2	Liquid	01/08/2023 10:45AM		
237172	B2	Liquid	01/08/2023 10:45AM	Field Aliquot	
237173	B2	Liquid	01/08/2023 10:45AM	Field Aliquot	
237174	B2	Liquid	01/08/2023 10:45AM	Field Aliquot	
237175	B2	Liquid	01/08/2023 10:45AM	Field Aliquot	
237162	B3	Liquid	01/08/2023 2:20PM		
237176	B3	Liquid	01/08/2023 2:20PM	Field Aliquot	
237177	B3	Liquid	01/08/2023 2:20PM	Field Aliquot	
237178	B3	Liquid	01/08/2023 2:20PM	Field Aliquot	
237179	B3	Liquid	01/08/2023 2:20PM	Field Aliquot	
237163	E1	Liquid	01/08/2023 11:44AM		
237180	E1	Liquid	01/08/2023 11:44AM	Field Aliquot	
237181	E1	Liquid	01/08/2023 11:44AM	Field Aliquot	
237182	E1	Liquid	01/08/2023 11:44AM	Field Aliquot	
237183	E1	Liquid	01/08/2023 11:44AM	Field Aliquot	
237164	E2	Liquid	01/08/2023 12:30PM		
237184	E2	Liquid	01/08/2023 12:30PM	Field Aliquot	
237185	E2	Liquid	01/08/2023 12:30PM	Field Aliquot	
237186	E2	Liquid	01/08/2023 12:30PM	Field Aliquot	
237187	E2	Liquid	01/08/2023 12:30PM	Field Aliquot	
237165	E3	Liquid	01/08/2023 1:20PM		
237188	E3	Liquid	01/08/2023 1:20PM	Field Aliquot	
237189	E3	Liquid	01/08/2023 1:20PM	Field Aliquot	
237190	E3	Liquid	01/08/2023 1:20PM	Field Aliquot	

Tests not covered by NATA accreditation 3040 are denoted with *

Codes: SN = Sample Note

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237191	E3	Liquid	01/08/2023	1:20PM	Field Aliquot	
237166	E4	Liquid	01/08/2023	1:50PM		
237192	E4	Liquid	01/08/2023	1:50PM	Field Aliquot	
237193	E4	Liquid	01/08/2023	1:50PM	Field Aliquot	
237194	E4	Liquid	01/08/2023	1:50PM	Field Aliquot	
237195	E4	Liquid	01/08/2023	1:50PM	Field Aliquot	
237167	E5	Liquid	01/08/2023	2:45PM		
237196	E5	Liquid	01/08/2023	2:45PM	Field Aliquot	
237197	E5	Liquid	01/08/2023	2:45PM	Field Aliquot	
237198	E5	Liquid	01/08/2023	2:45PM	Field Aliquot	
237199	E5	Liquid	01/08/2023	2:45PM	Field Aliquot	
237200	MFK-Z-E8	Liquid	03/08/2023	9:30PM		Filtered 1
237224	MFK-Z-E8	Liquid	03/08/2023	9:30PM	Field Aliquot	Filtered 2
237225	MFK-Z-E8	Liquid	03/08/2023	9:30PM	Field Aliquot	Unfiltered
237201	MFK-Z-E9	Liquid	03/08/2023	10:20AM		Filtered 1
237226	MFK-Z-E9	Liquid	03/08/2023	10:20AM	Field Aliquot	Filtered 2
237227	MFK-Z-E9	Liquid	03/08/2023	10:20AM	Field Aliquot	Unfiltered
237202	MFK-Z-E6	Liquid	03/08/2023	12:00PM		Filtered 1
237228	MFK-Z-E6	Liquid	03/08/2023	12:00PM	Field Aliquot	Filtered 2
237229	MFK-Z-E6	Liquid	03/08/2023	12:00PM	Field Aliquot	Unfiltered
237203	MFK-Z-B4	Liquid	03/08/2023	12:45PM		Filtered 1
237230	MFK-Z-B4	Liquid	03/08/2023	12:45PM	Field Aliquot	Filtered 2
237231	MFK-Z-B4	Liquid	03/08/2023	12:45PM	Field Aliquot	Unfiltered
237204	MFK-Z-E11	Liquid	02/08/2023	1:15PM		Filtered 1
237232	MFK-Z-E11	Liquid	02/08/2023	1:15PM	Field Aliquot	Filtered 2
237233	MFK-Z-E11	Liquid	02/08/2023	1:15PM	Field Aliquot	Unfiltered
237205	MFK-Z-E12	Liquid	02/08/2023	9:10AM		Filtered 1
237234	MFK-Z-E12	Liquid	02/08/2023	9:10AM	Field Aliquot	Filtered 2
237235	MFK-Z-E12	Liquid	02/08/2023	9:10AM	Field Aliquot	Unfiltered
237206	MFK-Z-E13	Liquid	02/08/2023	12:10PM		Filtered 1
237236	MFK-Z-E13	Liquid	02/08/2023	12:10PM	Field Aliquot	Filtered 2

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237237	MFK-Z-E13	Liquid	02/08/2023	12:10PM	Field Aliquot	Unfiltered
237207	MFK-Z-E14	Liquid	02/08/2023	11:15PM		Filtered 1
237238	MFK-Z-E14	Liquid	02/08/2023	11:15PM	Field Aliquot	Filtered 2
237239	MFK-Z-E14	Liquid	02/08/2023	11:15PM	Field Aliquot	Unfiltered
237208	MFK-Z-E15	Liquid	02/08/2023	10:30AM		Filtered 1
237240	MFK-Z-E15	Liquid	02/08/2023	10:30AM	Field Aliquot	Filtered 2
237241	MFK-Z-E15	Liquid	02/08/2023	10:30AM	Field Aliquot	Unfiltered
237209	MFK-Z-E7	Liquid	02/08/2023	2:30PM		Filtered 1
237242	MFK-Z-E7	Liquid	02/08/2023	2:30PM	Field Aliquot	Filtered 2
237243	MFK-Z-E7	Liquid	02/08/2023	2:30PM	Field Aliquot	Unfiltered
237210	MFK-Z-E6.5	Liquid	02/08/2023	3:00PM		Filtered 1
237244	MFK-Z-E6.5	Liquid	02/08/2023	3:00PM	Field Aliquot	Filtered 2
237245	MFK-Z-E6.5	Liquid	02/08/2023	3:00PM	Field Aliquot	Unfiltered
237211	MFK-Z-B1	Liquid	01/08/2023	1:00AM		Filtered 1
237246	MFK-Z-B1	Liquid	01/08/2023	1:00AM	Field Aliquot	Filtered 2
237247	MFK-Z-B1	Liquid	01/08/2023	1:00AM	Field Aliquot	Unfiltered
237212	MFK-Z-B2	Liquid	01/08/2023	1:00AM		Filtered 1
237248	MFK-Z-B2	Liquid	01/08/2023	1:00AM	Field Aliquot	Filtered 2
237249	MFK-Z-B2	Liquid	01/08/2023	1:00AM	Field Aliquot	Unfiltered
237213	MFK-Z-B3	Liquid	01/08/2023	1:00AM		Filtered 1
237250	MFK-Z-B3	Liquid	01/08/2023	1:00AM	Field Aliquot	Filtered 2
237251	MFK-Z-B3	Liquid	01/08/2023	1:00AM	Field Aliquot	Unfiltered
237214	MFK-Z-E1	Liquid	01/08/2023	1:00AM		Filtered 1
237252	MFK-Z-E1	Liquid	01/08/2023	1:00AM	Field Aliquot	Filtered 2
237253	MFK-Z-E1	Liquid	01/08/2023	1:00AM	Field Aliquot	Unfiltered
237215	MFK-Z-E2	Liquid	01/08/2023	1:00AM		Filtered 1
237254	MFK-Z-E2	Liquid	01/08/2023	1:00AM	Field Aliquot	Filtered 2
237255	MFK-Z-E2	Liquid	01/08/2023	1:00AM	Field Aliquot	Unfiltered
237216	MFK-Z-E3	Liquid	01/08/2023	1:00AM		Filtered 1
237256	MFK-Z-E3	Liquid	01/08/2023	1:00AM	Field Aliquot	Filtered 2
237257	MFK-Z-E3	Liquid	01/08/2023	1:00AM	Field Aliquot	Unfiltered

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237217	MFK-Z-E4	Liquid	01/08/2023	1:00AM		Filtered 1
237258	MFK-Z-E4	Liquid	01/08/2023	1:00AM	Field Aliquot	Filtered 2
237259	MFK-Z-E4	Liquid	01/08/2023	1:00AM	Field Aliquot	Unfiltered
237218	MFK-Z-E5	Liquid	01/08/2023	1:00AM		Filtered 1
237260	MFK-Z-E5	Liquid	01/08/2023	1:00AM	Field Aliquot	Filtered 2
237261	MFK-Z-E5	Liquid	01/08/2023	1:00AM	Field Aliquot	Unfiltered
237219	MFK-BW-E1	Liquid	01/08/2023	1:00AM		Filtered 1
237262	MFK-BW-E1	Liquid	01/08/2023	1:00AM	Field Aliquot	Filtered 2
237263	MFK-BW-E1	Liquid	01/08/2023	1:00AM	Field Aliquot	Unfiltered
237220	MFK-BW-E2	Liquid	01/08/2023	1:00AM		Filtered 1
237264	MFK-BW-E2	Liquid	01/08/2023	1:00AM	Field Aliquot	Filtered 2
237265	MFK-BW-E2	Liquid	01/08/2023	1:00AM	Field Aliquot	Unfiltered
237221	MFK-BW-E3	Liquid	01/08/2023	1:00AM		Filtered 1
237266	MFK-BW-E3	Liquid	01/08/2023	1:00AM	Field Aliquot	Filtered 2
237267	MFK-BW-E3	Liquid	01/08/2023	1:00AM	Field Aliquot	Unfiltered
237222	MFK-BW-E4	Liquid	01/08/2023	1:00AM		Filtered 1
237268	MFK-BW-E4	Liquid	01/08/2023	1:00AM	Field Aliquot	Filtered 2
237269	MFK-BW-E4	Liquid	01/08/2023	1:00AM	Field Aliquot	Unfiltered
237223	MFK-BW-E5	Liquid	01/08/2023	1:00AM		Filtered 1
237270	MFK-BW-E5	Liquid	01/08/2023	1:00AM	Field Aliquot	Filtered 2
237271	MFK-BW-E5	Liquid	01/08/2023	1:00AM	Field Aliquot	Unfiltered

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 237168, 237172, 237176, 237171, 237175, 237180, 237184, 237179, 237183, 237187, 237188, 237192, 237196, 237191, 237195, 237199, 237200, 237201, 237202, 237203, 237204, 237205, 237206, 237207, 237208, 237209, 237210, 237211, 237212, 237213, 237214, 237215, 237216, 237217, 237218, 237219, 237220, 237221, 237222, 237223, 237224, 237226, 237228, 237225, 237227, 237230, 237232, 237229, 237231, 237233, 237234, 237236, 237238, 237235, 237237, 237240, 237242, 237239, 237241, 237243, 237244, 237246, 237248, 237245, 237247, 237250, 237252, 237249, 237251, 237253, 237254, 237256, 237258, 237255, 237257, 237260, 237262, 237259, 237261, 237263, 237264, 237266, 237268, 237265, 237267, 237270, 237269, 237271 were sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of EA025: Total Suspended Solids dried at 104 ± 2°C, EA036: Fixed/Volatile Suspended Solids, (Fraction of Suspended S), ED040F: Dissolved Major Anions, ED093F: Dissolved Major Cations, EG020F: Dissolved Metals by ICP-MS, EG035F: Dissolved Mercury by FIMS, EK255A: Ammonia, EK259A: Nitrite and Nitrate (NOx), EK271A: Reactive Phosphorus, EK262A: Total Nitrogen, EK267A: Total Phosphorus (Persulfate Digestion). This report summarises data from the attached external report: ES2326343, dated 11-Aug-2023.

·Samples 237169, 237170, 237173, 237174, 237177, 237178, 237181, 237182, 237185, 237186, 237189, 237190, 237193, 237194, 237197 and 237198 were sent to Sydney Water Laboratory Services (NATA Accreditation no: 63 and 610) for the analysis of Algal Toxins, Algal ID and Enumeration. Please the attached Analytical Reports No: 289923 dated 24 August 2023.

·Samples 237160, 237161, 237162, 237163, 237164, 237165, 237166 and 237167 were analysed outside the method holding time for Pesticides by GCMSMS



Analysis Results - External Methods*		Sample ID	237169	237170	237173	237174	237177	237178	237181	237182	237185	237186	237189	237190
Area - EXTERNAL		Start Date	14/08/2023	14/08/2023	14/08/2023	14/08/2023	14/08/2023	14/08/2023	14/08/2023	14/08/2023	14/08/2023	14/08/2023	14/08/2023	14/08/2023
		Client ID	B1	B1	B2	B2	B3	B3	E1	E1	E2	E2	E3	E3
Analyte														
Algal Enumeration	-			RC		RC		RC		RC		RC		RC
Algal Identification	-			RC		RC		RC		RC		RC		RC
Algal Toxins	-		RC		RC		RC		RC		RC		RC	
Saxitoxins and PST	-		RC		RC		RC		RC		RC		RC	

Analysis Results - External Methods*		Sample ID	237193	237194	237197	237198
Area - EXTERNAL		Start Date	14/08/2023	14/08/2023	14/08/2023	14/08/2023
		Client ID	E4	E4	E5	E5
Analyte						
Algal Enumeration	-			RC		RC
Algal Identification	-			RC		RC
Algal Toxins	-		RC		RC	
Saxitoxins and PST	-		RC		RC	

Analysis Results - External Methods*		Sample ID	237200	237224	237225	237201	237226	237227	237202	237228	237229	237203	237230	237231
Area - EXTERNAL		Start Date	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023
		Client ID	MFK-Z-E8	MFK-Z-E8	MFK-Z-E8	MFK-Z-E9	MFK-Z-E9	MFK-Z-E9	MFK-Z-E6	MFK-Z-E6	MFK-Z-E6	MFK-Z-B4	MFK-Z-B4	MFK-Z-B4
Analyte														
Ammonia as N	mg/L		<0.005			0.014			<0.005			0.008		
Dissolved Total Nitrogen as N	mg/L			0.64			0.67			0.86			0.52	
Dissolved Total Phosphorus as P	mg/L			0.104			0.119			0.035			0.258	
Nitrite+Nitrate as N	mg/L		0.002			0.016			0.003			<0.002		
Reactive Phosphorus as P	mg/L		0.080			0.066			0.007			0.194		
Total Nitrogen as N	mg/L				1.04			1.23			1.43			0.65
Total Phosphorus as P	mg/L				0.193			0.249			0.151			0.293

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Analysis Results - External Methods*		Sample ID	237204	237232	237233	237205	237234	237235	237206	237236	237237	237207	237238	237239
Area - EXTERNAL		Start Date	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023
		Client ID	MFK-Z-E11	MFK-Z-E11	MFK-Z-E11	MFK-Z-E12	MFK-Z-E12	MFK-Z-E12	MFK-Z-E13	MFK-Z-E13	MFK-Z-E13	MFK-Z-E14	MFK-Z-E14	MFK-Z-E14
Analyte														
Ammonia as N	mg/L		<0,005			0,022			<0,005			<0,005		
Dissolved Total Nitrogen as N	mg/L			0,84				0,76		0,99			0,77	
Dissolved Total Phosphorus as P	mg/L			0,101				0,097		0,116			0,095	
Nitrite+Nitrate as N	mg/L		<0,002			<0,002			<0,002			0,002		
Reactive Phosphorus as P	mg/L		0,080			0,042			0,038			0,040		
Total Nitrogen as N	mg/L				1,98			2,12			2,00			2,14
Total Phosphorus as P	mg/L				0,343			0,356			0,351			0,331

Analysis Results - External Methods*		Sample ID	237208	237240	237241	237209	237242	237243	237210	237244	237245	237211	237246	237247
Area - EXTERNAL		Start Date	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023
		Client ID	MFK-Z-E15	MFK-Z-E15	MFK-Z-E15	MFK-Z-E7	MFK-Z-E7	MFK-Z-E7	MFK-Z-E6.5	MFK-Z-E6.5	MFK-Z-E6.5	MFK-Z-B1	MFK-Z-B1	MFK-Z-B1
Analyte														
Ammonia as N	mg/L		0,006			0,360			0,006			<0,005		
Dissolved Total Nitrogen as N	mg/L			0,79				1,97		0,95			0,88	
Dissolved Total Phosphorus as P	mg/L			0,092				0,396		0,173			0,029	
Nitrite+Nitrate as N	mg/L		0,003			0,154			0,004			0,028		
Reactive Phosphorus as P	mg/L		0,053			0,382			0,158			0,013		
Total Nitrogen as N	mg/L				1,97			2,56			1,54			1,03
Total Phosphorus as P	mg/L				0,318			0,620			0,343			0,090

Analysis Results - External Methods*		Sample ID	237212	237248	237249	237213	237250	237251	237214	237252	237253	237215	237254	237255
Area - EXTERNAL		Start Date	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023
		Client ID	MFK-Z-B2	MFK-Z-B2	MFK-Z-B2	MFK-Z-B3	MFK-Z-B3	MFK-Z-B3	MFK-Z-E1	MFK-Z-E1	MFK-Z-E1	MFK-Z-E2	MFK-Z-E2	MFK-Z-E2
Analyte														
Ammonia as N	mg/L		0,059			0,104			<0,005			<0,005		
Dissolved Total Nitrogen as N	mg/L			0,85				1,01		0,88			0,82	
Dissolved Total Phosphorus as P	mg/L			0,052				0,269		0,043			0,042	
Nitrite+Nitrate as N	mg/L		0,016			0,008			<0,002			<0,002		
Reactive Phosphorus as P	mg/L		0,036			0,217			0,030			0,024		
Total Nitrogen as N	mg/L				1,20			1,06			1,13			1,08
Total Phosphorus as P	mg/L				0,164			0,385			0,149			0,141

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Analysis Results - External Methods*		Sample ID	237216	237256	237257	237217	237258	237259	237218	237260	237261	237219	237262	237263
Area - EXTERNAL		Start Date	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023
		Client ID	MFK-Z-E3	MFK-Z-E3	MFK-Z-E3	MFK-Z-E4	MFK-Z-E4	MFK-Z-E4	MFK-Z-E5	MFK-Z-E5	MFK-Z-E5	MFK-BW-E1	MFK-BW-E1	MFK-BW-E1
Analyte														
Ammonia as N	mg/L		<0,005			<0,005			<0,005			0,023		
Dissolved Total Nitrogen as N	mg/L			0,82			0,81			0,82			0,90	
Dissolved Total Phosphorus as P	mg/L			0,035			0,029			0,081			0,057	
Nitrite+Nitrate as N	mg/L		<0,002			<0,002			0,002			0,005		
Reactive Phosphorus as P	mg/L		0,021			0,013			0,046			0,025		
Total Nitrogen as N	mg/L				1,05			0,99			0,98			0,62
Total Phosphorus as P	mg/L				0,112			0,107			0,171			0,051

Analysis Results - External Methods*		Sample ID	237220	237264	237265	237221	237266	237267	237222	237268	237269	237223	237270	237271
Area - EXTERNAL		Start Date	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023
		Client ID	MFK-BW-E2	MFK-BW-E2	MFK-BW-E2	MFK-BW-E3	MFK-BW-E3	MFK-BW-E3	MFK-BW-E4	MFK-BW-E4	MFK-BW-E4	MFK-BW-E5	MFK-BW-E5	MFK-BW-E5
Analyte														
Ammonia as N	mg/L		<0,005			0,013			<0,005			<0,005		
Dissolved Total Nitrogen as N	mg/L			0,79			0,83			0,90			0,79	
Dissolved Total Phosphorus as P	mg/L			0,050			0,031			0,030			0,080	
Nitrite+Nitrate as N	mg/L		0,003			0,015			<0,002			0,002		
Reactive Phosphorus as P	mg/L		0,044			0,014			0,017			0,059		
Total Nitrogen as N	mg/L				0,95			1,19			1,11			1,10
Total Phosphorus as P	mg/L				0,143			0,116			0,129			0,203

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Analysis Results - External Methods*

Area - EXTERNAL

Analyte

Sample ID	237168	237171	237172	237175	237176	237179	237180	237183	237184	237187	237188	237191
Start Date	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023
Client ID	B1	B1	B2	B2	B3	B3	E1	E1	E2	E2	E3	E3
Aluminium	mg/L	0.18		0.82		4.01		0.57		0.56		0.24
Antimony	mg/L	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001
Arsenic	mg/L	0.001		0.002		0.006		0.002		0.002		0.002
Barium	mg/L	0.124		0.120		0.090		0.126		0.107		0.132
Beryllium	mg/L	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001
Boron	mg/L	<0.05		<0.05		0.05		<0.05		<0.05		0.05
Cadmium	mg/L	<0.0001		<0.0001		<0.0001		<0.0001		<0.0001		<0.0001
Calcium	mg/L	45		42		29		45		38		46
Chromium	mg/L	<0.001		<0.001		0.003		<0.001		<0.001		<0.001
Cobalt	mg/L	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001
Copper	mg/L	0.002		0.002		0.004		0.002		0.002		0.001
Fixed Suspended Solids @ 550 C	%	<0.1		61		64		56		<0.1		<0.1
Fixed Suspended Solids @ 550°C	mg/L	<5		17		17		15		<5		<5
Iron	mg/L	0.11		0.50		2.23		0.34		0.35		0.14
Lead	mg/L	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001
Lithium	mg/L	0.002		0.002		0.002		0.002		0.001		0.002
Magnesium	mg/L	26		23		13		24		20		25
Manganese	mg/L	<0.001		0.028		<0.001		0.011		0.020		<0.001
Mercury	mg/L	<0.0001		<0.0001		<0.0001		<0.0001		<0.0001		<0.0001
Molybdenum	mg/L	0.003		0.002		0.002		0.002		0.002		0.002
Nickel	mg/L	0.003		0.003		0.004		0.003		0.003		0.003
Potassium	mg/L	9		10		11		11		10		10
Selenium	mg/L	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01
Silver	mg/L	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001
Sodium	mg/L	88		75		40		81		64		83
Strontium	mg/L	0.500		0.458		0.298		0.488		0.406		0.502
Sulfur as S	mg/L	7		6		2		6		5		6
Suspended Solids (SS)	mg/L	6		28		27		26		18		15
Thallium	mg/L	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001
Tin	mg/L	<0.001		<0.001		<0.001		<0.001		<0.001		<0.001
Titanium	mg/L	0.01		0.05		0.18		0.03		0.04		0.01
Vanadium	mg/L	<0.01		<0.01		0.02		<0.01		<0.01		<0.01

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Analysis Results - External Methods*

Area - EXTERNAL

	<i>Sample ID</i>	237168	237171	237172	237175	237176	237179	237180	237183	237184	237187	237188	237191
	<i>Start Date</i>	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023	7/08/2023
	<i>Client ID</i>	B1	B1	B2	B2	B3	B3	E1	E1	E2	E2	E3	E3
<i>Analyte</i>													
Volatile Suspended Solids @ 550 C	%	100		39		36		44		100		100	
Volatile Suspended Solids @ 550°C	mg/L	6		11		10		11		18		15	
Zinc	mg/L		<0,005		<0,005		<0,005		<0,005		<0,005		<0,005

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Analysis Results - External Methods*		Sample ID	237192	237195	237196	237199
Area - EXTERNAL		Start Date	7/08/2023	7/08/2023	7/08/2023	7/08/2023
Analyte		Client ID	E4	E4	E5	E5
Aluminium	mg/L			0.18		0.90
Antimony	mg/L			<0.001		<0.001
Arsenic	mg/L			0.002		0.002
Barium	mg/L			0.130		0.120
Beryllium	mg/L			<0.001		<0.001
Boron	mg/L			<0.05		<0.05
Cadmium	mg/L			<0.0001		<0.0001
Calcium	mg/L			46		42
Chromium	mg/L			<0.001		<0.001
Cobalt	mg/L			<0.001		<0.001
Copper	mg/L			0.001		0.002
Fixed Suspended Solids @ 550 C	%		<0.1		<0.1	
Fixed Suspended Solids @ 550°C	mg/L		<5		<5	
Iron	mg/L			0.10		0.52
Lead	mg/L			<0.001		<0.001
Lithium	mg/L			0.001		0.002
Magnesium	mg/L			25		22
Manganese	mg/L			0.019		0.017
Mercury	mg/L			<0.0001		<0.0001
Molybdenum	mg/L			0.002		0.002
Nickel	mg/L			0.002		0.002
Potassium	mg/L			10		10
Selenium	mg/L			<0.01		<0.01
Silver	mg/L			<0.001		<0.001
Sodium	mg/L			85		73
Strontium	mg/L			0.496		0.448
Sulfur as S	mg/L			7		6
Suspended Solids (SS)	mg/L		10		18	
Thallium	mg/L			<0.001		<0.001
Tin	mg/L			<0.001		<0.001
Titanium	mg/L			0.01		0.04
Vanadium	mg/L			<0.01		<0.01

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Analysis Results - External Methods*		Sample ID	237192	237195	237196	237199
Area - EXTERNAL		Start Date	7/08/2023	7/08/2023	7/08/2023	7/08/2023
		Client ID	E4	E4	E5	E5
Analyte						
Volatile Suspended Solids @ 550 C	%		100		100	
Volatile Suspended Solids @ 550°C	mg/L		10		18	
Zinc	mg/L			<0,005		<0,005

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Analysis Results - QQPEST
Area - ORGANIC

Analyte	Sample ID Start Date Client ID	237160	237161	237162	237163	237164	237165	237166	237167
		15/08/2023 B1	15/08/2023 B2	15/08/2023 B3	15/08/2023 E1	15/08/2023 E2	15/08/2023 E3	15/08/2023 E4	15/08/2023 E5
Aldrin	µg/L	<0.3	<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	<0.5
Alpha-Chlordane	µg/L	<0.4	<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	<0.4
Ametryn	µg/L	<0.5	<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	<0.5
Atrazine	µg/L	<0.5	<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	<0.5
Bifenthrin	µg/L	<0.5	<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	<0.3
Carbophenothion	µg/L	<0.5	<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	<0.4
Cis-permethrin	µg/L	<0.3	<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	<0.5
Cyfluthrin	µg/L	<0.5	<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	<0.5
delta-HCH	µg/L	<0.5	<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	<0.5
Diazinon	µg/L	<0.5	<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	<0.4
Dieldrin	µg/L	<0.5	<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	<0.5
Endosulfan II	µg/L	<1.0	<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	<0.9
Endosulfan Sulfate	µg/L	<1.0	<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	<0.5
Endrin Ketone	µg/L	<0.5	<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	<0.5
Ethion	µg/L	<0.5	<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	<0.5
Fenitrothion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenthion	µg/L	<0.4	<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	237160	237161	237162	237163	237164	237165	237166	237167
		15/08/2023 B1	15/08/2023 B2	15/08/2023 B3	15/08/2023 E1	15/08/2023 E2	15/08/2023 E3	15/08/2023 E4	15/08/2023 E5
Fenvalerate	µg/L	<0.5	<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	<0.4
gamma-HCH	µg/L	<0.4	<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	<0.5
Heptachlor	µg/L	<0.4	<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	<0.3
Hexazinone	µg/L	<0.5	<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	<0.5
Malathion	µg/L	<0.5	<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	<0.5
Methyl Azinphos	µg/L	<0.4	<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	<0.4
Methyl Parathion	µg/L	<0.5	<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	<0.4
Oxyfluorfen	µg/L	<0.5	<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	<0.5
Phorate	µg/L	<0.4	<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	<0.5
Prometon	µg/L	<0.5	<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	<0.5
Propargite	µg/L	<0.5	<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	<0.5
Propetamphos	µg/L	<0.5	<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	<0.5
Simetryn	µg/L	<0.5	<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	<0.4
Tebuconazole	µg/L	<0.5	<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	<0.5
Terbutylazine	µg/L	<0.5	<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	<0.5
Tetrachlorvinphos	µg/L	<0.5	<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	<0.7

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Area - ORGANIC

Sample ID	Client ID	Method	Start Date	Result
237160	B1	OLCSCAN* - LC/MS Scan	08/08/2023	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).
237161	B2	OLCSCAN* - LC/MS Scan	08/08/2023	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).
237162	B3	OLCSCAN* - LC/MS Scan	08/08/2023	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).
237163	E1	OLCSCAN* - LC/MS Scan	08/08/2023	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).
237164	E2	OLCSCAN* - LC/MS Scan	08/08/2023	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).
237165	E3	OLCSCAN* - LC/MS Scan	08/08/2023	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).
237166	E4	OLCSCAN* - LC/MS Scan	08/08/2023	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).
237167	E5	OLCSCAN* - LC/MS Scan	08/08/2023	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
QQQPEST	Determination of Multiresidue Pesticides by GCMSMS	ORGANIC
OLCSCAN*	Qualitative LC/MS scan	ORGANIC

The results in this report were authorised by:

Name	Title	Area
[REDACTED]	Scientist	EXTERNAL
[REDACTED]	Scientist	ORGANIC

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