



**Environmental Forensics Report of Analysis**  
**Project 20230359**

**Report #:** 1894  
**Date Issued:** 25-Sep-2023  
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**Client Project Reference: Darling-Barka River Health Project**

Customer: Department of Planning & Environment

Attention: [REDACTED]

Report Date: 25 September 2023

Project Received: 25 August 2023

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



**The following samples were analysed:**

Sample ID	Client ID	Sample Type	Client Sampled Date/Time	Aliquot
237920	E11	Liquid	24/08/2023	
237925	E11	Liquid	24/08/2023	Field Aliquot
237930	E11	Liquid	24/08/2023	Field Aliquot
237921	E12	Liquid	24/08/2023	
237926	E12	Liquid	24/08/2023	Field Aliquot
237931	E12	Liquid	24/08/2023	Field Aliquot
237922	E13	Liquid	24/08/2023	
237927	E13	Liquid	24/08/2023	Field Aliquot
237932	E13	Liquid	24/08/2023	Field Aliquot
237923	E14	Liquid	24/08/2023	
237928	E14	Liquid	24/08/2023	Field Aliquot
237933	E14	Liquid	24/08/2023	Field Aliquot
237924	E15	Liquid	24/08/2023	
237929	E15	Liquid	24/08/2023	Field Aliquot
237934	E15	Liquid	24/08/2023	Field Aliquot
237935	Z-E11-F1	Liquid	24/08/2023	
237936	Z-E12-F1	Liquid	24/08/2023	
237937	Z-E13-F1	Liquid	24/08/2023	
237938	Z-E14-F1	Liquid	24/08/2023	
237939	Z-E15-F1	Liquid	24/08/2023	
237940	Z-E11-F2	Liquid	24/08/2023	
237941	Z-E12-F2	Liquid	24/08/2023	
237942	Z-E13-F2	Liquid	24/08/2023	
237943	Z-E14-F2	Liquid	24/08/2023	
237944	Z-E15-F2	Liquid	24/08/2023	
237945	Z-E11-UNF	Liquid	24/08/2023	
237946	Z-E12-UNF	Liquid	24/08/2023	
237947	Z-E13-UNF	Liquid	24/08/2023	
237948	Z-E14-UNF	Liquid	24/08/2023	

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

Codes: SN = Sample Note

RN = Result Note

RC = Project Comment



237949 Z-E15-UNF Liquid 24/08/2023

### 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 237930 to 237934 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. 290842 dated 09-Sept-2023.

Samples 237925 to 237929 were sent to Sydney Water Laboratory Services (NATA accreditation no. 63 and 610) for the analysis of Algal Toxins. Please see the attached Analytical Report no. 290842 dated 09-Sept-2023, which gives the Algal Toxins analysis results and also the Blue-Green Algal ID and Enumeration summary results.

· Samples 237920 to 237924 were sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of EA025: Total Suspended Solids dried at  $104 \pm 2^\circ\text{C}$ , EA036: Fixed/Volatile Suspended Solids, (Fraction of Suspended S). This report summarises data from the attached external report: ES2330392, dated 12-Sep-2023.

· Samples 237935 to 237949 were sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of EK255A: Ammonia, EK259A: Nitrite and Nitrate (NO<sub>x</sub>), EK262A: Total Nitrogen, EK267A: Total Phosphorus (Persulfate Digestion), EK271A: Reactive Phosphorus. This report summarises data from the attached external report: ES2329148, dated 01-Sep-2023.



**Analysis Results - External Methods\***

**Area - EXTERNAL**

		Sample ID	237925	237930	237926	237931	237927	237932	237928	237933	237929	237934
		Start Date	28/08/2023	7/09/2023	28/08/2023	7/09/2023	28/08/2023	7/09/2023	28/08/2023	7/09/2023	28/08/2023	7/09/2023
		Client ID	E11	E11	E12	E12	E13	E13	E14	E14	E15	E15
<b>Analyte</b>												
Algal Enumeration	-			RC		RC		RC		RC		RC
Algal Identification	-			RC		RC		RC		RC		RC
Algal Toxins	-		RC		RC		RC		RC		RC	
Saxitoxins and PST	-		RC		RC		RC		RC		RC	

**Analysis Results - External Methods\***

**Area - EXTERNAL**

		Sample ID	237935	237936	237937	237938	237939	237940	237941	237942	237943	237944	237945	237946
		Start Date	28/08/2023	28/08/2023	28/08/2023	28/08/2023	28/08/2023	28/08/2023	28/08/2023	28/08/2023	28/08/2023	28/08/2023	28/08/2023	28/08/2023
		Client ID	Z-E11-F1	Z-E12-F1	Z-E13-F1	Z-E14-F1	Z-E15-F1	Z-E11-F2	Z-E12-F2	Z-E13-F2	Z-E14-F2	Z-E15-F2	Z-E11-UNF	Z-E12-UNF
<b>Analyte</b>														
Ammonia as N	mg/L		0.117	0.006	<0.005	<0.005	<0.005							
Dissolved Total Nitrogen as N	mg/L							0.8	0.98	0.63	0.75	0.72		
Dissolved Total Phosphorus as P	mg/L							0.193	0.23	0.139	0.117	0.102		
Nitrite+Nitrate as N	mg/L		0.038	0.012	0.006	0.01	0.008							
Reactive Phosphorus as P	mg/L		0.158	0.184	0.082	0.06	0.065							
Total Nitrogen as N	mg/L												1.35	2.33
Total Phosphorus as P	mg/L												0.328	0.512

**Analysis Results - External Methods\***

**Area - EXTERNAL**

		Sample ID	237947	237948	237949
		Start Date	28/08/2023	28/08/2023	28/08/2023
		Client ID	Z-E13-UNF	Z-E14-UNF	Z-E15-UNF
<b>Analyte</b>					
Total Nitrogen as N	mg/L		2.16	2.32	1.83
Total Phosphorus as P	mg/L		0.403	0.4	0.288

**Analysis Results - External Methods\***

**Area - EXTERNAL**

		Sample ID	237920	237921	237922	237923	237924
		Start Date	11/09/2023	11/09/2023	11/09/2023	11/09/2023	11/09/2023
		Client ID	E11	E12	E13	E14	E15
<b>Analyte</b>							
Fixed Suspended Solids @ 550°C	mg/L		50	75	41	16	5
Suspended Solids (SS)	mg/L		91	125	92	65	48
Volatile Suspended Solids @ 550°C	mg/L		41	50	51	49	43

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

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

<i>Method code</i>	<i>Method description</i>	<i>Area</i>
External Methods*	External Methods - Analysis completed externally	EXTERNAL
External Methods*	External Methods - Analysis completed externally	EXTERNAL
External Methods*	External Methods - Analysis completed externally	EXTERNAL

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

<i>Name</i>	<i>Title</i>	<i>Area</i>
[REDACTED]	Senior Scientist	EXTERNAL