

# COFFS HARBOUR LABORATORY

## Environmental Analysis

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KEMPSEY SHIRE COUNCIL  
BLAKE GIDDY  
P.O. BOX 3078  
WEST KEMPSEY NSW 2440

BATCHNUMBER: 24/2339  
No. of SAMPLES: 12  
DATE COLLECTED: 09/10/24  
DATE RECEIVED: 10/10/24  
TIME RECEIVED: 16:30  
DATE TESTING COMMENCED:  
10/10/24

### REPORT OF ANALYSIS

SAMPLE REFERENCE	SAMPLE DESCRIPTION
24/2339/1	South Kempsey TP
24/2339/2	Crescent Head CW
24/2339/3	Gladstone TP
24/2339/4	Frederickton TP
24/2339/5	South West Rocks CW
24/2339/6	North St Final TP
24/2339/7	Hat Head C Well
24/2339/8	South Kempsey STP Head Wall Day Pond
24/2339/9	Upstream Gladstone TP
24/2339/10	Downstream Gladstone TP
24/2339/11	Upstream Frederickton TP
24/2339/12	Downstream Frederickton TP

ANALYSIS	UNITS	24/2339/1	24/2339/2	24/2339/3	24/2339/4	METHOD NO
pH	pH unit	6.8	7.4	9.5	8.2	APHA 4500-H+ B
Conductivity	$\mu\text{S/cm}$	-	924	-	-	APHA 2510 B
Turbidity	NTU	-	1.5	-	-	APHA 2130 B
Transmittance	%	-	-	66.5	-	APHA 5910
Total Dissolved Solids	mg/L	-	-	-	-	EL7B
Alkalinity	mg CaCO <sub>3</sub> /L	-	-	-	-	APHA 2320 B
Total Suspended Solids	mg/L	3	3	6	8	APHA 2540 D
Biochem Oxygen Demand (BOD <sub>5</sub> )	mg/L	4	<2	2	3	APHA 5210 B



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ANALYSIS	UNITS	24/2339/1	24/2339/2	24/2339/3	24/2339/4	METHODNO
Nitrate Nitrogen	mg/L	-	0.11	-	-	APHA 4500-NO3I
Nitrite Nitrogen	mg/L	-	-	-	-	APHA 4500-NO 2
Ammonia Nitrogen	mg/L	3.69	0.36	0.12	0.18	APHA 4500-NH3 H
Total Nitrogen	mg/L	4.74	1.67	1.10	1.82	APHA 4500-P J
Total Phosphorus	mg/L	4.04	1.03	2.11	7.61	APHA 4500-P J
Oil & Grease	mg/L	<2	<2	<2	<2	EL23A
Chlorophyll-a	µg/L	-	-	5	12	APHA 10200 H
Potassium	mg/L	-	-	-	-	EL9A
Chloride	mg/L	-	-	-	-	EL10
Arsenic	mg/L	-	-	-	-	EL9A
Thermotolerant Coliforms	cfu/100mL	250	2	300	450	ELM 3

ANALYSIS	UNITS	24/2339/5	24/2339/6	24/2339/7	24/2339/8	METHODNO
pH	pH unit	7.6	8.6	7.3	-	APHA 4500-H+ B
Conductivity	µS/cm	618	-	817	-	APHA 2510 B
Turbidity	NTU	16	-	1.3	-	APHA 2130 B
Transmittance	%	-	-	-	-	APHA 5910
Total Dissolved Solids	mg/L	-	-	523	-	EL7B
Alkalinity	mg CaCO <sub>3</sub> /L	168	-	67	-	APHA 2320 B
Total Suspended Solids	mg/L	20	16	20	-	APHA 2540 D
Biochem Oxygen Demand (BOD5)	mg/L	26	7	<2	-	APHA 5210 B
Nitrate Nitrogen	mg/L	-	2.09	4.33	-	APHA 4500-NO3I
Nitrite Nitrogen	mg/L	-	0.40	-	-	APHA 4500-NO 2
Ammonia Nitrogen	mg/L	28.4	9.15	1.83	-	APHA 4500-NH3 H
Total Nitrogen	mg/L	32.3	13.4	6.82	-	APHA 4500-P J
Total Phosphorus	mg/L	5.04	0.28	0.10	-	APHA 4500-P J
Oil & Grease	mg/L	<2	<2	<2	-	EL23A
Chlorophyll-a	µg/L	-	169	-	-	APHA 10200 H
Potassium	mg/L	16	-	21	-	EL9A
Chloride	mg/L	83	-	127	-	EL10
Arsenic	mg/L	<0.012	-	-	-	EL9A
Thermotolerant Coliforms	cfu/100mL	540	40	12	4,750	ELM 3



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ANALYSIS	UNITS	24/2339/9	24/2339/10	24/2339/11	24/2339/12	METHODNO
pH	pH unit	-	-	-	-	APHA 4500-H+ B
Conductivity	µS/cm	-	-	-	-	APHA 2510 B
Turbidity	NTU	-	-	-	-	APHA 2130 B
Transmittance	%	-	-	-	-	APHA 5910
Total Dissolved Solids	mg/L	-	-	-	-	EL7B
Alkalinity	mg CaCO <sub>3</sub> /L	-	-	-	-	APHA 2320 B
Total Suspended Solids	mg/L	-	-	-	-	APHA 2540 D
Biochem Oxygen Demand (BOD5)	mg/L	-	-	-	-	APHA 5210 B
Nitrate Nitrogen	mg/L	-	-	-	-	APHA 4500-NO3I
Nitrite Nitrogen	mg/L	-	-	-	-	APHA 4500-NO 2
Ammonia Nitrogen	mg/L	-	-	-	-	APHA 4500-NH3 H
Total Nitrogen	mg/L	-	-	-	-	APHA 4500-P J
Total Phosphorus	mg/L	-	-	-	-	APHA 4500-P J
Oil & Grease	mg/L	-	-	-	-	EL23A
Chlorophyll-a	µg/L	-	-	-	-	APHA 10200 H
Potassium	mg/L	-	-	-	-	EL9A
Chloride	mg/L	-	-	-	-	EL10
Arsenic	mg/L	-	-	-	-	EL9A
Thermotolerant Coliforms	cfu/100mL	130	130	280	100	ELM 3

ANALYSIS	UNITS	24/2339/1	24/2339/2	24/2339/3	24/2339/4	METHODNO
<b>PFAS*</b>						
PFBA (375-22-4)	ug/L	<0.05	<0.05	<0.05	<0.05	NR70
PFPeA (2706-90-3)	ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFHxA (307-24-4)	ug/L	0.014	0.011	<0.01	<0.01	NR70
PFHpA (375-85-9)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFOA (335-67-1)	ug/L	<0.01	0.015	<0.01	<0.01	NR70
PFNA (375-95-1)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFDA (335-76-2)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFUdA (2058-94-8)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFDoA (307-55-1)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFTrDA (72629-94-8)	ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFTeDA (376-06-7)	ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFHxDA (67905-19-5)	ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFODO (16517-11-6)	ug/L	<0.05	<0.05	<0.05	<0.05	NR70
FOUEA (70887-84-2)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFDS (335-77-3)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFPeS (2706-91-4)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFHxS (355-46-4)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFHpS (375-92-8)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFOS (1763-23-1)	ug/L	0.026	<0.02	<0.02	0.021	NR70
PFNS (68259-12-1)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFBS (375-73-5)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70



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ANALYSIS	UNITS	24/2339/1	24/2339/2	24/2339/3	24/2339/4	METHODNO
PFOSA (754-91-6)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-MeFOSA (31506-32-8)	ug/L	<0.02	<0.02	<0.02	<0.02	NR70
N-EtFOSA (4151-50-2)	ug/L	<0.02	<0.02	<0.02	<0.02	NR70
N-MeFOSAA (2355-31-9)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-EtFOSAA (2991-50-6)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-MeFOSE (24448-09-7)	ug/L	<0.05	<0.05	<0.05	<0.05	NR70
N-EtFOSE (1691-99-2)	ug/L	<0.02	<0.02	<0.02	<0.02	NR70
4:2FTS (757124-72-4)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
6:2FTS (27619-97-2)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
8:2FTS (39108-34-4)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
10:2FTS (120226-60-0)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
8:2diPAP (678-41-1)	ug/L	<0.02	<0.02	<0.02	<0.02	NR70



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ANALYSIS	UNITS	24/2339/5	24/2339/6	24/2339/7	24/2339/8	METHODNO
<b>PFAS*</b>						
PFBA (375-22-4)	ug/L	<0.05	<0.05	<0.05	-	NR70
PFPeA (2706-90-3)	ug/L	0.026	<0.02	<0.02	-	NR70
PFHxA (307-24-4)	ug/L	0.046	<0.01	<0.01	-	NR70
PFHpA (375-85-9)	ug/L	0.02	<0.01	<0.01	-	NR70
PFOA (335-67-1)	ug/L	<0.01	<0.01	<0.01	-	NR70
PFNA (375-95-1)	ug/L	<0.01	<0.01	<0.01	-	NR70
PFDA (335-76-2)	ug/L	<0.01	<0.01	<0.01	-	NR70
PFUdA (2058-94-8)	ug/L	<0.01	<0.01	<0.01	-	NR70
PFDoA (307-55-1)	ug/L	<0.01	<0.01	<0.01	-	NR70
PFTrDA (72629-94-8)	ug/L	<0.02	<0.02	<0.02	-	NR70
PFTeDA (376-06-7)	ug/L	<0.02	<0.02	<0.02	-	NR70
PFHxDA (67905-19-5)	ug/L	<0.02	<0.02	<0.02	-	NR70
PFODO (16517-11-6)	ug/L	<0.05	<0.05	<0.05	-	NR70
FOUEA (70887-84-2)	ug/L	<0.01	<0.01	<0.01	-	NR70
PFDS (335-77-3)	ug/L	<0.01	<0.01	<0.01	-	NR70
PFPeS (2706-91-4)	ug/L	<0.01	<0.01	<0.01	-	NR70
PFHxS (355-46-4)	ug/L	<0.01	<0.01	<0.01	-	NR70
PFHpS (375-92-8)	ug/L	<0.01	<0.01	<0.01	-	NR70
PFOS (1763-23-1)	ug/L	<0.02	<0.02	<0.02	-	NR70
PFNS (68259-12-1)	ug/L	<0.01	<0.01	<0.01	-	NR70
PFBS (375-73-5)	ug/L	<0.01	<0.01	<0.01	-	NR70
PFOSA (754-91-6)	ug/L	<0.01	<0.01	<0.01	-	NR70
N-MeFOSA (31506-32-8)	ug/L	<0.02	<0.02	<0.02	-	NR70
N-EtFOSA (4151-50-2)	ug/L	<0.02	<0.02	<0.02	-	NR70
N-MeFOSAA (2355-31-9)	ug/L	<0.01	<0.01	<0.01	-	NR70
N-EtFOSAA (2991-50-6)	ug/L	<0.01	<0.01	<0.01	-	NR70
N-MeFOSE (24448-09-7)	ug/L	<0.05	<0.05	<0.05	-	NR70
N-EtFOSE (1691-99-2)	ug/L	<0.02	<0.02	<0.02	-	NR70
4:2FTS (757124-72-4)	ug/L	<0.01	<0.01	<0.01	-	NR70
6:2FTS (27619-97-2)	ug/L	<0.01	<0.01	<0.01	-	NR70
8:2FTS (39108-34-4)	ug/L	<0.01	<0.01	<0.01	-	NR70
10:2FTS (120226-60-0)	ug/L	<0.01	<0.01	<0.01	-	NR70
8:2 diPAP (678-41-1)	ug/L	<0.02	<0.02	<0.02	-	NR70



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ANALYSIS	UNITS	24/2339/9	24/2339/10	24/2339/11	24/2339/12	METHODNO
<b>PFAS*</b>						
PFBA (375-22-4)	ug/L	-	-	-	-	NR70
PFPeA (2706-90-3)	ug/L	-	-	-	-	NR70
PFHxA (307-24-4)	ug/L	-	-	-	-	NR70
PFHpA (375-85-9)	ug/L	-	-	-	-	NR70
PFOA (335-67-1)	ug/L	-	-	-	-	NR70
PFNA (375-95-1)	ug/L	-	-	-	-	NR70
PFDA (335-76-2)	ug/L	-	-	-	-	NR70
PFUdA (2058-94-8)	ug/L	-	-	-	-	NR70
PFDoA (307-55-1)	ug/L	-	-	-	-	NR70
PFTrDA (72629-94-8)	ug/L	-	-	-	-	NR70
PFTeDA (376-06-7)	ug/L	-	-	-	-	NR70
PFHxDA (67905-19-5)	ug/L	-	-	-	-	NR70
PFODO (16517-11-6)	ug/L	-	-	-	-	NR70
FOUEA (70887-84-2)	ug/L	-	-	-	-	NR70
PFDS (335-77-3)	ug/L	-	-	-	-	NR70
PFPeS (2706-91-4)	ug/L	-	-	-	-	NR70
PFHxS (355-46-4)	ug/L	-	-	-	-	NR70
PFHpS (375-92-8)	ug/L	-	-	-	-	NR70
PFOS (1763-23-1)	ug/L	-	-	-	-	NR70
PFNS (68259-12-1)	ug/L	-	-	-	-	NR70
PFBS (375-73-5)	ug/L	-	-	-	-	NR70
PFOSA (754-91-6)	ug/L	-	-	-	-	NR70
N-MeFOSA (31506-32-8)	ug/L	-	-	-	-	NR70
N-EtFOSA (4151-50-2)	ug/L	-	-	-	-	NR70
N-MeFOSAA (2355-31-9)	ug/L	-	-	-	-	NR70
N-EtFOSAA (2991-50-6)	ug/L	-	-	-	-	NR70
N-MeFOSE (24448-09-7)	ug/L	-	-	-	-	NR70
N-EtFOSE (1691-99-2)	ug/L	-	-	-	-	NR70
4:2FTS (757124-72-4)	ug/L	-	-	-	-	NR70
6:2FTS (27619-97-2)	ug/L	-	-	-	-	NR70
8:2FTS (39108-34-4)	ug/L	-	-	-	-	NR70
10:2FTS (120226-60-0)	ug/L	-	-	-	-	NR70
8:2 diPAP (678-41-1)	ug/L	-	-	-	-	NR70



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**Comments**

Sample(s) collected by client and analysed as received in accordance with "Standard Methods for the Examination of Water & Wastewater", 24th Edition, 2023, APHA. Raw data sheets stating analysis dates are available upon request.

Tests marked with '#' are not covered by NATA Accreditation.

Note: Microbiological results are presumptive.

Measurement Uncertainty is available upon request.

Results may have been affected by a deviation from specified conditions.

\*Analysis conducted by a subcontracted laboratory (NATA Accreditation Number 198) RN 1444566.

Report Date: 28/10/24



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Approved:

A handwritten signature in black ink that reads 'Shane Ewart'.

Shane Ewart  
Technical Supervisor  
Microbiology and Chemistry

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