

COFFS HARBOUR LABORATORY

Environmental Analysis

Page 1 of 7



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

BATCHNUMBER: 24/0040
No. of SAMPLES: 12
DATE COLLECTED: 03/01/24
DATE RECEIVED: 03/01/24
TIME RECEIVED: 11:30
DATE TESTING COMMENCED:
03/01/24

REPORT OF ANALYSIS

SAMPLE REFERENCE	SAMPLE DESCRIPTION
24/0040/1	South Kempsey TP
24/0040/2	Crescent Head CW
24/0040/3	Gladstone TP
24/0040/4	Frederickton TP
24/0040/5	South West Rocks CW
24/0040/6	North St Final TP
24/0040/7	Hat Head C Well
24/0040/8	South Kempsey STP Head Wall Day Pond
24/0040/9	Upstream Gladstone TP
24/0040/10	Downstream Gladstone TP
24/0040/11	Upstream Frederickton TP
24/0040/12	Downstream Frederickton TP

ANALYSIS	UNITS	24/0040/1	24/0040/2	24/0040/3	24/0040/4	METHOD NO
pH	pH unit	7.0	7.1	8.7	8.0	APHA 4500-H+ B
Conductivity	$\mu\text{S/cm}$	-	1,130	-	-	APHA 2510 B
Turbidity	NTU	-	1.6	-	-	APHA 2130 B
Transmittance	%	-	-	46.9	-	APHA 5910
Total Dissolved Solids	mg/L	-	-	-	-	EL7B
Alkalinity	mg CaCO ₃ /L	-	-	-	-	APHA 2320 B
Total Suspended Solids	mg/L	3	<2	21	27	APHA 2540 D
Biochem Oxygen Demand (BOD5)	mg/L	6	3	14	12	APHA 5210 B



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[Accreditation Numbers: 12359 (Chemical) & 14565 (Microbiological)]

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ANALYSIS	UNITS	24/0040/1	24/0040/2	24/0040/3	24/0040/4	METHODNO
Nitrate Nitrogen	mg/L	-	6.81	-	-	APHA 4500-NO3I
Nitrite Nitrogen	mg/L	-	-	-	-	APHA 4500-NO 2
Ammonia Nitrogen	mg/L	8.44	0.26	0.02	0.21	APHA 4500-NH3 H
Total Nitrogen	mg/L	10.1	8.70	2.11	2.94	APHA 4500-P J
Total Phosphorus	mg/L	8.12	0.13	7.87	10.0	APHA 4500-P J
Oil & Grease	mg/L	<2	<2	<2	<2	EL23A
Chlorophyll-a	µg/L	-	-	69	94	APHA 10200 H
Potassium	mg/L	-	-	-	-	EL9A
Chloride	mg/L	-	-	-	-	EL10
Arsenic	mg/L	-	-	-	-	EL9A
Thermotolerant Coliforms	cfu/100mL	3,700	18	2,200	1,200	ELM 3

ANALYSIS	UNITS	24/0040/5	24/0040/6	24/0040/7	24/0040/8	METHODNO
pH	pH unit	7.1	9.0	7.0	-	APHA 4500-H+ B
Conductivity	µS/cm	666	-	983	-	APHA 2510 B
Turbidity	NTU	2.1	-	0.50	-	APHA 2130 B
Transmittance	%	-	-	-	-	APHA 5910
Total Dissolved Solids	mg/L	-	-	629	-	EL7B
Alkalinity	mg CaCO ₃ /L	61	-	46	-	APHA 2320 B
Total Suspended Solids	mg/L	2	39	<2	-	APHA 2540 D
Biochem Oxygen Demand (BOD5)	mg/L	2	9	<2	-	APHA 5210 B
Nitrate Nitrogen	mg/L	-	0.66	2.14	-	APHA 4500-NO3I
Nitrite Nitrogen	mg/L	-	0.16	-	-	APHA 4500-NO 2
Ammonia Nitrogen	mg/L	<0.02	0.17	0.07	-	APHA 4500-NH3 H
Total Nitrogen	mg/L	1.56	3.85	2.94	-	APHA 4500-P J
Total Phosphorus	mg/L	1.34	0.62	0.03	-	APHA 4500-P J
Oil & Grease	mg/L	<2	<2	<2	-	EL23A
Chlorophyll-a	µg/L	-	136	-	-	APHA 10200 H
Potassium	mg/L	22	-	24	-	EL9A
Chloride	mg/L	111	-	153	-	EL10
Arsenic	mg/L	<0.012	-	-	-	EL9A
Thermotolerant Coliforms	cfu/100mL	0	230	1	7,600	ELM 3



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ANALYSIS	UNITS	24/0040/9	24/0040/10	24/0040/11	24/0040/12	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 ₃ /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-NO3 I
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	-	-	165	85	ELM 3

ANALYSIS	UNITS	24/0040/1	24/0040/2	24/0040/3	24/0040/4	METHODNO
PFAS*						
PFBA (375-22-4)	ug/L	<0.05	<0.05	<0.05	<0.05	NR70
PFPeA (2706-90-3)	ug/L	<0.02	0.026	<0.02	<0.02	NR70
PFHxA (307-24-4)	ug/L	0.021	0.033	<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	0.025	<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	<0.010	0.011	<0.010	<0.010	NR70
PFHpS (375-92-8)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFOS (1763-23-1)	ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFNS (68259-12-1)	ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFBS (375-73-5)	ug/L	<0.010	0.020	<0.010	<0.010	NR70



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ANALYSIS	UNITS	24/0040/1	24/0040/2	24/0040/3	24/0040/4	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	<0.05	<0.05	<0.05	<0.05	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	24/0040/5	24/0040/6	24/0040/7	24/0040/8	METHODNO
PFAS*						
PFBA (375-22-4)	ug/L	<0.05	<0.05	<0.05	-	NR70
PFPeA (2706-90-3)	ug/L	<0.02	<0.02	<0.02	-	NR70
PFHxA (307-24-4)	ug/L	<0.01	<0.01	<0.01	-	NR70
PFHpA (375-85-9)	ug/L	<0.01	<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
PFTTrDA (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	<0.010	<0.010	<0.010	-	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	<0.010	<0.010	<0.010	-	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	<0.05	<0.05	<0.05	-	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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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
PFTTrDA (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, 2022, 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.

*Analysis conducted by a subcontracted laboratory (NATA Accreditation Number 198) RN1416187.

Report Date: 17/01/24



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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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