Client ID: Fonterra Australia Limited (Darnum)
Project Name: Darnum Groundwater, Wastewater & Surface Water Monitoring
Site Location: Fonterra Darnum, Darnum Park Road, Darnum VIC 3822
Project ID: ENV.W.100519
Report Date: 26 November 2025

Fonterra Australia Limited (Darnum)

Attachment 3: Surface Water and Wastewater Laboratory Monitoring Results

CTS ENVIRONMENTAL
AIR WATER SOIL

Well ID	Sample Date	Time	Graphical Coordinates (G		pH Value	ORP	Electrical Conductivity	Temperature	Salinity	Turbidity	Dissolved Oxygen % Sat.	Dissolved Oxygen	Suspended Solids (SS)	Total Dissolved Solids @180°C	Biochemical Oxygen Demand	Biochemical Oxygen Demand (Filtered	Chemical Oxygen Demand	Chemical Oxygen Demand - Filtered	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Total Alkalinity as CaCO3	Sulfate as SO4 - Turbidimetric	Sulfur as S	Chloride	Calcium	Magnesium	Potassium	Sodium	Iron	*Sum of Ions (calculation)	*Ionic Balance	Sodium Adsorption Ratio	Nitrate as N	Nitrate as NO3	Nitrite as N	Nitrite as NO2	Total Kjeldahl Nitrogen as N	Total Nitrogen as N	Ammonia as NH3	Ammonia as N	Ammonium as N	Total Phosphorus as P	Escherichia coli (Colilert)	*Total BGA (cyanobacteria)	*Total BGA Biovolume (cyanobacteria)	Total Identification and Count	Chlorophyll a	Colour (True)	Fluoride
			Latitude	Longitude																																												
Units					Units	mV	µs/cm	oC	ppt	NTU	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	orgs/100 ml	cells/ml	mm3/L	cells/ml	mg/m3	PCU	mg/L
LOR					0 - 14	±2000	0 - 9999	-5 - 50	0 - 70	0 - 3000	0 - 500	0 - 50	5	10	5	5	15	30	5	5	5	5	2	1	1	1	1	1	1	0.05	100			0.01	0.05	0.01	0.05	0.1	0.1	0.01	0.01	0.01	0.01	0	1	0.001	0	0.0005	1.0	0.1
WASTEWATER MONITORING RESULTS																																																	
Agriculture and Irrigation - Irrigation (ANZECC 2000 Irrigation Long Term - 100 yrs - Trigger Values)					6.0-9.0 #3																				350 #2				230 #2	0.2			46 #7						5				0.05 #4						1.0
Agriculture and Irrigation - Irrigation (ANZECC 2000 Irrigation Short Term - 20 yrs - Trigger Values)																														10									<25#5				<0.8 #5						2.0
EPA Operating Licence OL000069244 (amended 11th January 2023) - Discharge Limits to Moe River					6.0-9.0			21.0		10																																							
Victoria Publication 1910.2 - Victorian Guideline for Water Recycling (Clas					6.0 - 9.0					2			5		10																												10							
Victoria Publication 1910.2 - Victorian Guideline for Water Recycling (Clas					6.0 - 9.0								30		20																												100							
Victoria Publication 1910.2 - Victorian Guideline for Water Recycling (Clas					6.0 - 9.0								30		20																												1000							
STORAGE LAGOON 1	18-Nov-25	13:00	-38.168162	146.010325	8.2	-	1720	18.2	-	43	-	-	52	1040	33	<2	149	69	769	30	<1	799	19	7	34	20	4	247	232	1.53	1403	1.19	12.4	10.5	46.50	0.51	1.68	7.7	18.7	0.28	0.23	0.22	11.2	100	39616	0.217700	1404256	36	-	0.6
TREATMENT LAGOON 1	18-Nov-25	13:15	-38.169239	146.010001	8.2	-	1840	19.7	-	-	-	-	214	1180	87	3	400	54	908	15	<1	923	12	6	35	24	4	267	250	0.45	1517	1.15	12.4	0.2	0.89	<0.01	<0.05	20.5	20.7	0.46	0.38	0.36	13.9	180	1059750	6.489380	1783400	282	-	0.7
TREATMENT LAGOON 2	18-Nov-25	13:30	-38.168878	146.012569	8.3	-	1790	17.9	-	-	-	-	90	1180	24	<2	210	87	826	<1	<1	826	18	6	33	20	5	257	240	1.18	1438	1.69	12.4	8.18	36.20	0.59	1.94	12.6	21.4	2.01	1.65	1.55	14	63	5622	0.032360	21146	277	-	0.6
IAF OUTLET	-	-	-38.171438	146.009449	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STORAGE LAGOON 2	18-Nov-25	15:00	-38.170586	146.013229	8.5	-	1700	17.7	-	-	-	-	16	1070	7	-	56	-	755	56	<1	811	24	-	33	13	5	244	233	1.22	1374	0.57	13.9	2.11	9.34	0.11	0.36	2.7	4.9	0.15	0.12	0.11	7.45	47	0	0.000000	8854	8	-	0.4
STORAGE LAGOON 3	18-Nov-25	14:15	-38.171763	146.013054	8.8	-	1800	17.4	-	-	-	-	18	1140	6	-	65	-	773	97	<1	869	35	-	35	11	5	257	250	0.5	1476	1.79	15.7	3.02	13.40	0.06	0.20	3.2	6.3	0.27	0.22	0.19	6.98	210	0	0.000000	2886	6	-	0.3
STORAGE LAGOON 4	18-Nov-25	14:30	-38.169670	146.018995	8.8	-	1790	17.2	-	-	-	-	10	1110	2	-	52	-	749	109	<1	857	39	-	37	10	5	252	250	0.62	1465	2.01	16.1	3.21	14.20	0.05	0.16	2.8	6.1	0.05	0.04	0.03	6.56	38	0	0.000000	3364	2	-	0.3
TOWN WATER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SURFACE WATER MONITORING RESULTS																																																	
Water Dependent Ecosystems and Species (ANZECC 2000 Fresh Water 95%)																																2.4 a							0.9										
al Foothills and Coastal Plains' - Lowlands of Yarra, South Gippsland, Bun					6.7 - 7.7		250			25	75% - 130%																												1.1			0.02 #6	0.055					5 #6		
V-NOTCH 1	-	-	-38.167943	146.014591	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V-NOTCH 2	-	-	-38.165867	146.008155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V-NOTCH 3	-	-	-38.166187	146.003266	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WETLANDS	-	-	-38.166292	146.006074	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LMR UPSTREAM	-	-	-38.169246	145.969873	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LMR DOWNSTREAM	-	-	-38.180078	145.986903	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SETTLERS Ck UPSTREAM	-	-	-38.160167	145.999884	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SETTLERS Ck DOWNSTREAM	-	-	-38.173607	145.988216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STOCK WATERING																																																	
Agriculture and Irrigation - Stock Watering (ANZECC 2000 Livestock DW Low Risk Trigger Values)										5 #1	<80% Sat #1			2000 #8									1000			1000	2000						90.3*		9.1^								100							2.0
STOCK WATER	-	-	-38.165843	146.021772	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quality Assurance / Quality Control																																																	
'Rinsate' Sample Identification - SAMPLE BUCKET					-	-	-	-	-	-	-	-	-	187	-	-	-	-	38	47	<1	84	<1	-	<1	<1	<1	33	39	<0.05	<160	-	<66	<0.01	<0.05	0.02	0.07	1.2	1.2	<0.01	<0.01	-	0.08	-	-	-	-	-	-	<0.1
Blind Field Duplicate' (BFD) Identification - QC1					-	-	-	-	-	-	-	-	-	1110	-	-	-	-	762	62	<1	824	24	-	33	13	5	245	234	1.37	1392	-	14.0	2.82	12.5	0.1	0.33	3	5.9	0.13	0.11	-	7.54	-	-	-	-	-	-	0.4
'Primary' Sample Identification - STORAGE LAGOON 2					-	-	-	-	-	-	-	-	-	1070	-	-	-	-	755	56	<1	811	24	-	33	13	5	244	233	1.22	1374	-	13.9	2.11	9.34	0.11	0.36	2.7	4.9	0.15	0.12	-	7.45	-	-	-	-	-	-	0.4
Relative Percentage Difference (RPD%)					-	-	-	-	-	-	-	-	-	3.7%	-	-	-	-	0.9%	10.2%	#	1.6%	0.0%	-	0.0%	0.0%	0.0%	0.4%	0.4%	11.6%	1.3%	-	0.4%	28.8%	28.9%	9.5%	8.7%	10.5%	18.5%	14.3%	8.7%	-	1.2%	-	-	-	-	-	-	0.0%

Notes:
*Analysis performed by ALS Environmental (NATA 825) Workorder: EM2521361_0
Calibration Report ID: Performed by Fonterra
RPD could not be calculated as one or more results were reported below Laboratory Limit of Reporting (LOR)
RPD% = RPD is above acceptance criteria.
& Extimated by using method AN121: This sums Na, K, Ca, Mg, NH3, Fe, Cl, Total Alkalinity, SO4 and NO3 - This is not NATA Accredited.
LOR - Laboratory Limit of Reporting

Assessment Guidelines Comments:
#1 NHMRC Australian Drinking Water Guideline (Health) adopted
#2 Trigger value for prevention of foliar injury. Trigger value for moderately tolerant crops (i.e. lucerne, barley, sorghum)
#3 for surface water systems
#4 To minimise biocklogging of irrigation equipment
#5 Requires site-specific assessment
#6 In the absence of criteria, ANZECC (2000): Indicative ranges of default trigger values for slightly disturbed ecosystems in south-east Australia (specifically 'Lowland Rivers') has been adopted.
#7 Based on 'high' tolerance crops such as wheat, cotton, lucerne, barley, beets and rhodes grass. SAR – 46-102 will cause stunted growth in wheat, lucerne and barley.
#8 Based on no adverse effects on poultry expected.

* For comparison between guidelines and laboratory results, a conversion factor of 4.43 has been applied to convert Nitrate (as N) to Nitrate (as NO_3^-)
^ For comparison between guidelines and laboratory results, a conversion factor of 3.29 has been applied to Nitrite (as N) to convert to Nitrite (as NO2-)
* For comparison between guidelines and laboratory results, a conversion factor of 1.215 has been applied to Ammonia (as N) to convert to Ammonia (as NH3)
^To calculate ammonia as NH4 use multiplying factor of 1.214 x ammonia as N value.
a National Institue of Water & Atmospheric Research, NIWA, Updating Nitrate Toxicity Effects on Freshwater Aquatic Species (NIWA, January 2013)

Shaded cells denotes the results has exceeded the following assessment criteria.
- Australian and New Zealand guidelines for Fresh and Marine Water Quality, Fresh Water Ecosystems, 95% protection (ANZECC/ARMCANZ 2000)
- Environmental Reference Standard (ERS, 2021) - 'Central Foothills and Coastal Plains' - Lowlands of Yarra, South Gippsland, Bunyip, Latrobe, Thomson, Mitchell, Tambo & Snowy Basin
- Australian and New Zealand guidelines for Fresh and Marine Water Quality,Primary Industries (Irrigation Long Term) (ANZECC/ARMCANZ 2000)
- Australian and New Zealand guidelines for Fresh and Marine Water Quality,Primary Industries (Irrigation Short Term) (ANZECC/ARMCANZ 2000)
- EPA Operating Licence OL000069244 (amended 11th January 2023) - Discharge Limits to Moe River
- EPA Victoria Publication 1910.2 - Victorian Guideline for Water Recycling

ADDITIONAL COMMENTS:

Phone: *1300 085 028*
Web: *www.ctsenvironmental.com.au*
E-mail: *sales@ctsenvironmental.com.au*
Address: *5 - 7 Brentwood Way, Waurn Ponds, Victoria, 3216*