

BARGO WASTE MANAGEMENT CENTRE ANTHONY ROAD BARGO - SAMPLING RESULTS
SAMPLING ON 16TH FEBRUARY 2023
EPA LICENCE NUMBER 6061
<http://www.environment.nsw.gov.au/prpaeopp/>
WOLLONDILLY SHIRE COUNCIL
62-64 Menangle Street PICTON NSW 2571

SAMPLING LOCATIONS				EPA1	EPA2	EPA3	EPA4	EPA5	EPA6	EPA7	EPA8	EPA11
Pollutant	Unit of Measure	Monitoring Frequency	Concentration Limits for Sampling Point	Well located south of pond	Sediment pond	Near Bargo site entrance, directly in creek upstream of landfill.	Directly in creek downstream of landfill.	Sediment pond	Leachate discharge	Well located next to road outside the Bargo site	Well located south eastern corner	Dog Trap Creek downstream of landfill (EPA4a)
Alkalinity (as calcium carbonate)	mg/L	Annual						..1				
Aluminium	mg/L	Annual / Quarterly				0.21	0.04	..1				0.06
Ammonia (as nitrogen)	mg/L	Quarterly	0.9 milligrams per litre for Points 14 and 15 only	65.8	0.05	0.02	0.02	..1		0.11	0.1	0.02
Arsenic	mg/L	Annual / Quarterly		0.001				..1				
Barium	mg/L	Annual / Quarterly						..1				
Benzene	mg/L	Annual						..1				
Biochemical Oxygen Demand (BOD)	mg/L	Quarterly						..1				
Cadmium	mg/L	Annual / Quarterly						..1	0.0004			
Calcium	mg/L	Annual						..1				
Chemical Oxygen Demand (COD)	mg/L	Quarterly						..1				
Chloride (Cl)	mg/L	Annual						..1				
Chlorinated Volatile Compounds (CVCs)	mg/L	Annual						..1				
Chromium (hexavalent)	mg/L	Annual / Quarterly						..1				
Chromium (total)	mg/L	Annual / Quarterly		0.005			0.001	..1	0.001			
Cobalt	mg/L	Annual / Quarterly						..1				
Copper	mg/L	Annual / Quarterly						..1	0.013			
Ethylbenzene	mg/L	Annual						..1				
Fluoride	mg/L	Annual						..1				
Lead	mg/L	Annual / Quarterly						..1				
Magnesium	mg/L	Annual						..1				
Manganese	mg/L	Annual / Quarterly						..1				
Mercury	mg/L	Annual / Quarterly						..1				
Nitrate (as Nitrogen)	mg/L	Annual / Quarterly		2.05		0.03	3.52	..1	12.1			0.24
Nitrite (as Nitrogen)	mg/L	Annual / Quarterly		0.04			0.01	..1				
Organochlorine Pesticides (OCP)	mg/L	Annual						..1				
Organophosphorus Pesticides (OPP)	mg/L	Annual						..1				
Polycyclic Aromatic Hydrocarbons (PAH)	mg/L	Annual						..1				
Perfluorooctane sulfonic acid (PFOS)	µg/L	Quarterly		0.52	0.1		0.18	..1	0.26			0.09
Perfluorooctanoic acid (PFOA)	µg/L	Quarterly		0.84	0.23		0.32	..1	0.53			0.14
Sum of PFHxS and PFOS	µg/L	Quarterly		1.59	0.29		0.62	..1	0.71			0.3
Potassium	mg/L	Annual						..1				
Semi-volatile Organic Compounds (SVOCs)	mg/L	Annual						..1				
Sodium	mg/L	Annual						..1				
Sulphate (as SO ₄)	mg/L	Annual						..1				
Toluene	mg/L	Annual						..1				
Total Dissolved Solids (TDS)	mg/L	Quarterly		1,370	464	104	470	..1	1,000	250	127	
Total Iron	mg/L	Annual						..1				
Total Kjeldahl Nitrogen	mg/L	Quarterly		66.4		0.5	1.2	..1	2.4			0.6
Total Nitrogen	mg/L	Quarterly		68.5		0.5	4.7	..1	14.5			0.8
Total Organic Carbon (TOC)	mg/L	Quarterly		56	23	5	14	..1	24	7	5	10
Total Petroleum Hydrocarbons (TPH)	mg/L	Annual						..1				
Total Phenolics	mg/L	Annual						..1				
Total Phosphorus	mg/L	Annual / Quarterly		0.4		0.02	0.02	..1	0.03			0.06
Total Suspended Solids (TSS)	mg/L	Quarterly	50 milligrams per litre for Points 14 & 15 only					..1				
Volatile Organic Compounds (VOCs)	mg/L	Annual						..1				
Xylenes	mg/L	Annual						..1				
Zinc	mg/L	Annual / Quarterly		0.068		0.018		..1	0.211			

FIELD MEASUREMENTS

Standing Water Level	metres below top of casing (TOC)	Quarterly		1.45	-	-	-	..1	-	37.51	12.45	-
Electrical Conductivity	microsiemens per centimetre	Quarterly		2456	711	156	803	..1	1220	518.5	345.5	528.6
PH	PH Units	Quarterly		6.8	8.09	5.56	7.65	..1	6.91	5.51	6.84	7.71
Temp	Degrees Celcius	Quarterly		16.9	12.3	8.3	8.9	..1	14.3	15.7	15.4	10.5

*1 - EPA5 unable to be collected due to the locations being dry at the time of sampling

BARGO WA:

SAMPLING LOCATIONS				EPA12	EPA13	EPA14	EPA15
Pollutant	Unit of Measure	Monitoring Frequency	Concentration Limits for Sampling Point	Dog Trap Creek downstream of landfill (EPA4b)	Directly in creek downstream of leachate flow (DTC)	Discharge point (Sediment Pond A)	Discharge point (Sediment Pond B)
Alkalinity (as calcium carbonate)	mg/L	Annual					
Aluminium	mg/L	Annual / Quarterly		0.14	0.07		
Ammonia (as nitrogen)	mg/L	Quarterly	0.9 milligrams per litre for Points 14 and 15 only	0.03	0.08		
Arsenic	mg/L	Annual / Quarterly					
Barium	mg/L	Annual / Quarterly					
Benzene	mg/L	Annual					
Biochemical Oxygen Demand (BOD)	mg/L	Quarterly					
Cadmium	mg/L	Annual / Quarterly					
Calcium	mg/L	Annual					
Chemical Oxygen Demand (COD)	mg/L	Quarterly					
Chloride (Cl)	mg/L	Annual					
Chlorinated Volatile Compounds (CVCs)	mg/L	Annual					
Chromium (hexavalent)	mg/L	Annual / Quarterly					
Chromium (total)	mg/L	Annual / Quarterly					
Cobalt	mg/L	Annual / Quarterly					
Copper	mg/L	Annual / Quarterly					
Ethylbenzene	mg/L	Annual					
Fluoride	mg/L	Annual					
Lead	mg/L	Annual / Quarterly					
Magnesium	mg/L	Annual					
Manganese	mg/L	Annual / Quarterly					
Mercury	mg/L	Annual / Quarterly					
Nitrate (as Nitrogen)	mg/L	Annual / Quarterly		0.04			
Nitrite (as Nitrogen)	mg/L	Annual / Quarterly					
Organochlorine Pesticides (OCP)	mg/L	Annual					
Organophosphorus Pesticides (OPP)	mg/L	Annual					
Polycyclic Aromatic Hydrocarbons (PAH)	mg/L	Annual					
Perfluorooctane sulfonic acid (PFOS)	µg/L	Quarterly		0.02			
Perfluorooctanoic acid (PFOA)	µg/L	Quarterly		0.02			
Sum of PFHxS and PFOS	µg/L	Quarterly		0.07			
Potassium	mg/L	Annual					
Semi-volatile Organic Compounds (SVOCs)	mg/L	Annual					
Sodium	mg/L	Annual					
Sulphate (as SO ₄)	mg/L	Annual					
Toluene	mg/L	Annual					
Total Dissolved Solids (TDS)	mg/L	Quarterly			157		
Total Iron	mg/L	Annual					
Total Kjeldahl Nitrogen	mg/L	Quarterly		0.3	0.4		
Total Nitrogen	mg/L	Quarterly		0.3	0.4		
Total Organic Carbon (TOC)	mg/L	Quarterly		5	4		
Total Petroleum Hydrocarbons (TPH)	mg/L	Annual					
Total Phenolics	mg/L	Annual					
Total Phosphorus	mg/L	Annual / Quarterly		0.01	0.03		
Total Suspended Solids (TSS)	mg/L	Quarterly	50 milligrams per litre for Points 14 & 15 only		22		
Volatile Organic Compounds (VOCs)	mg/L	Annual					
Xylenes	mg/L	Annual					
Zinc	mg/L	Annual / Quarterly					
Standing Water Level	metres below top of casing (TOC)	Quarterly		-	-	-	-
Electrical Conductivity	microsiemens per centimetre	Quarterly		238.9	189		
PH	PH Units	Quarterly		7.36	5.72		
Temp	Degrees Celcius	Quarterly		11	11		

*1 - EPA5 unable to be collected due to the locations being dry at the time of sampling

BARGO WASTE MANAGEMENT CENTRE ANTHONY ROAD BARGO - SAMPLING RESULTS
SAMPLING ON 01ST AUGUST 2023
EPA LICENCE NUMBER 6061
<http://www.environment.nsw.gov.au/prpoeopp/>
WOLLONDILLY SHIRE COUNCIL
62-64 Menangle Street PICTON NSW 2571

SAMPLING LOCATIONS			EPA1	EPA2	EPA3	EPA4	EPAS	EPA6	EPA7	EPA8	EPA11	EPA12	EPA13	EPA14	EPA15	
Pollutant	Unit of Measure	Monitoring Frequency	Concentration Limits for Sampling Point	Well located south of pond	Sediment pond	Near Bargo site entrance, directly in creek upstream of landfill	Directly in creek downstream of landfill	Sediment pond	Leachate discharge	Well located next to road outside the Bargo site	Well located south eastern corner	Dog Trap Creek downstream of landfill (EPA4)	Dog Trap Creek downstream of landfill (EPA6)	Directly in creek downstream of leachate flow (DTC)	Discharge point (Sediment Pond A)	Discharge point (Sediment Pond B)
Alkalinity (as calcium carbonate)	mg/L	Annual		1,300	185	¹	¹	443	29	10						
Aluminium	mg/L	Annual / Quarterly		<0.01	0.1	¹	0.04	¹	<0.01	<0.01	0.16	0.04	0.06	0.59		
Ammonia (as nitrogen)	mg/L	Quarterly	0.9 milligrams per litre for Points 14 and 15 only	75.7	0.13	¹	0.03	¹	0.04	0.06	0.63	0.02	0.05	0.02		
Arsenic	mg/L	Annual / Quarterly		0.002	0.001	¹	<0.001	¹	<0.001	0.005	0.001			<0.001		
Barium	mg/L	Annual / Quarterly		0.512		¹				0.287	0.211			0.088		
Benzene	mg/L	Annual		<1	<1	¹	¹	<1	<1	<1						
Biochemical Oxygen Demand (BOD)	mg/L	Quarterly		8	3	¹	3	2						2		
Cadmium	mg/L	Annual / Quarterly		<0.001	<0.001	¹	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	0.002		
Calcium	mg/L	Annual		222	59	¹		328	3							
Chemical Oxygen Demand (COD)	mg/L	Quarterly		225	58	¹	42	57						16		
Chloride (Cl)	mg/L	Annual		195	65	¹		216	218	164						
Chlorinated Volatile Compounds (CVCs)	mg/L	Annual				¹										
Chromium (hexavalent)	mg/L	Annual / Quarterly				¹										
Chromium (total)	mg/L	Annual / Quarterly		0.006	<0.001	¹	0.002	¹	<0.001	<0.001	<0.001	0.001	<0.001	0.001		
Cobalt	mg/L	Annual / Quarterly		0.002	<0.001	¹	<0.001	¹	<0.001	0.049	0.025			<0.001		
Copper	mg/L	Annual / Quarterly		0.005	<0.001	¹	<0.001	¹	0.011	0.002	0.004	0.002	<0.001	0.006		
Ethylbenzene	mg/L	Annual		<1	<1	¹	¹	<1	<1	<1						
Fluoride	mg/L	Annual		0.2	0.2	¹		0.2	0.3	<0.1						
Lead	mg/L	Annual / Quarterly		<0.001	<0.001	¹	<0.001	¹	<0.001	<0.001	<0.001	<0.001		0.002		
Magnesium	mg/L	Annual		22	16	¹		43	20	13						
Manganese	mg/L	Annual / Quarterly		0.008	0.066	¹	0.006	0.004	1.63	1.93				0.061		
Mercury	mg/L	Annual / Quarterly		<0.001	<0.001	¹	¹	<0.001	<0.001	<0.001				<0.001		
Nitrate (as Nitrogen)	mg/L	Annual / Quarterly		0.1	0.03	¹	2.28	9.38	0.1	0.38	0.02	0.02	0.02	5.28		
Nitrite (as Nitrogen)	mg/L	Annual / Quarterly		0.01	<0.01	¹	0.02	¹	<0.01	<0.01	0.15	<0.01	<0.01	0.03		
Organochlorine Pesticides (OCP)	mg/L	Annual		<1.0R	<1.0R	¹		<1.0R	<1.0R	<1.0R						
Organophosphorus Pesticides (OPP)	mg/L	Annual		<1.0R	<1.0R	¹		<1.0R	<1.0R	<1.0R						
Perfluorooctane sulfonic acid (PFOS)	µg/L	Quarterly		0.5	0.12	¹	0.14	0.33	<0.01	<0.01	0.08	0.02	0.14			
Perfluorooctanoic acid (PFOA)	µg/L	Quarterly		0.76	0.25	¹	0.32	0.52	<0.01	<0.01	0.14	0.02	0.53			
Polycyclic Aromatic Hydrocarbons (PAH)	mg/L	Annual		<1.0R	<1.0R	¹		<1.0R	<1.0R	<1.0R						
Potassium	mg/L	Annual		22	18	¹		46	3	3						
Semi-volatile Organic Compounds (SVOCs)	mg/L	Annual		<1.0R	<1.0R	¹		<1.0R	<1.0R	<1.0R						
Sodium	mg/L	Annual		157	63	¹		130	78	62						
Sulphate (as SO ₄)	mg/L	Annual		<10	178	¹		26	8	8						
Sum of PFHxS and PFOS	µg/L	Quarterly		1.57	0.33	¹	0.65	0.86	<0.01	<0.01	0.34	0.08	0.92			
Toluene	mg/L	Annual		<1	<1	¹		<1	<1	<1						
Total Dissolved Solids (TDS)	mg/L	Quarterly		1,500	527	¹	598	958	178	273				888		
Total Iron	mg/L	Annual				¹										
Total Kjeldahl Nitrogen	mg/L	Quarterly		22	1.8	¹	1.3	1.8			0.6	0.4	2.7			
Total Nitrogen	mg/L	Quarterly		22.1	1.8	¹	3.6	11.2			0.6	0.4	8			
Total Organic Carbon (TOC)	mg/L	Quarterly		65	22	¹	20	25	3	23	12	8	25			
Total Petroleum Hydrocarbons (TPH)	mg/L	Annual		410	<1.0R	¹		<1.0R	<1.0R	<1.0R						
Total Phenolics	mg/L	Annual		<1.0R	<1.0R	¹		<1.0R	<1.0R	<1.0R						
Total Phosphorus	mg/L	Annual / Quarterly		0.26		¹	0.03	0.01			0.04	0.05	0.05			
Total Suspended Solids (TSS)	mg/L	Quarterly	50 milligrams per litre for Points 14 & 15 only		17	¹	¹	¹								
Volatile Organic Compounds (VOCs)	mg/L	Annual		<1.0R	<1.0R	¹		<1.0R	<1.0R	<1.0R						
Xylenes	mg/L	Annual		<1	<1	¹		<1	<1	<1						
Zinc	mg/L	Annual / Quarterly		0.007	<0.005	¹	<0.005	0.204	0.068	0.074	0.006	<0.005	0.122			

FIELD MEASUREMENTS															
Standing Water Level	metres below top of casing (TOC)	Quarterly		1.72		¹					14.73				
Electrical Conductivity	microsiemens per centimetre	Quarterly		2749	315.8	¹	1000	2231	815	362.8	66.1	330.5	1424		
pH	pH Units	Quarterly		7.06	8.16	¹	7.94	7.3	5.9	5.47	7.46	6.83	7.66		
Temp	Degrees Celsius	Quarterly		18	12.4	¹	10.6	17.1	16.5	19.1	9.9	12.2	14.7		

*1 - EPA3 and EPAS unable to be collected due to the locations being dry at the time of sampling
*1 - EPA7 standing water level unable to be gauged due to equipment issues

BARGO WASTE MANAGEMENT CENTRE ANTHONY ROAD BARGO - SAMPLING RESULTS
SAMPLING ON 17 NOVEMBER 2023
EPA LICENCE NUMBER 8061
<http://www.environment.nsw.gov.au/nrpoecopp/>
WOLLONDILLY SHIRE COUNCIL
62-64 Menangle Street PICTON NSW 2571

SAMPLING LOCATIONS				EPA1	EPA2	EPA3	EPA4	EPA5	EPA6	EPA7	EPA8	EPA11
Pollutant	Unit of Measure	Monitoring Frequency	Concentration Limits for Sampling Point	Well located south of pond	Sediment pond	Near Bargo site entrance, directly in creek upstream of landfill	Directly in creek downstream of landfill	Sediment pond	Leachate discharge	Well located next to road outside the Bargo site	Well located south eastern corner	Dog Trap Creek downstream of landfill (EPA4a)
Alkalinity (as calcium carbonate)	mg/L	Annual						1				
Aluminium	mg/L	Annual / Quarterly				0.83	0.19	1				0.42
Ammonia (as nitrogen)	mg/L	Quarterly	0.9 milligrams per litre for Points 14 and 15 only	56.7	0.02	0.03	0.42	1		0.1	0.18	0.05
Arsenic	mg/L	Annual / Quarterly		0.001		0.002	0.002	1				
Barium	mg/L	Annual / Quarterly						1				
Benzene	mg/L	Annual						1				
Biochemical Oxygen Demand (BOD)	mg/L	Quarterly						1				
Cadmium	mg/L	Annual / Quarterly						1				
Calcium	mg/L	Annual						1				
Chemical Oxygen Demand (COD)	mg/L	Quarterly						1				
Chloride (Cl)	mg/L	Annual						1				
Chlorinated Volatile Compounds (CVCs)	mg/L	Annual						1				
Chromium (hexavalent)	mg/L	Annual / Quarterly						1				
Chromium (total)	mg/L	Annual / Quarterly		0.007		0.001		1	0.001			
Cobalt	mg/L	Annual / Quarterly		0.002				1				
Copper	mg/L	Annual / Quarterly		0.004		0.002		1				
Ethylbenzene	mg/L	Annual						1				
Fluoride	mg/L	Annual						1				
Lead	mg/L	Annual / Quarterly				0.002		1				
Magnesium	mg/L	Annual						1				
Manganese	mg/L	Annual / Quarterly		0.464		0.206	0.506	1				0.082
Mercury	mg/L	Annual / Quarterly						1				
Nitrate (as Nitrogen)	mg/L	Annual / Quarterly		0.58		0.01	3.62	1	3.34			0.06
Nitrite (as Nitrogen)	mg/L	Annual / Quarterly		0.02				1	0.02			
Organochlorine Pesticides (OCP)	mg/L	Annual						1				
Organophosphorus Pesticides (OPP)	mg/L	Annual						1				
Polycyclic Aromatic Hydrocarbons (PAH)	mg/L	Annual						1				
Perfluorooctane sulfonic acid (PFOS)	ug/L	Quarterly		0.48	0.09		0.14	1	0.36			
Perfluorooctanoic acid (PFQA)	ug/L	Quarterly		0.73	0.25		0.16	1	0.49			
Sum of PFHxS and PFOS	ug/L	Quarterly		1.63	0.32		0.36	1	0.85			
Potassium	mg/L	Annual						1				
Semi-volatile Organic Compounds (SVOCs)	mg/L	Annual						1				
Sodium	mg/L	Annual						1				
Sulphate (as SO ₄)	mg/L	Annual						1				
Toluene	mg/L	Annual						1				
Total Dissolved Solids (TDS)	mg/L	Quarterly		1,660	606	162	406	1	952	714	343	146
Total Iron	mg/L	Annual						1				
Total Kjeldahl Nitrogen	mg/L	Quarterly		59.8		1.9	2.3	1	1.6			1.0
Total Nitrogen	mg/L	Quarterly		60.4		1.9	5.9	1	5.0			1.1
Total Organic Carbon (TOC)	mg/L	Quarterly		66	30	30	25	1	25	5	5	13
Total Petroleum Hydrocarbons (TPH)	mg/L	Annual						1				
Total Phenolics	mg/L	Annual						1				
Total Phosphorus	mg/L	Annual / Quarterly		0.28		0.09	0.06	1	0.03			0.07
Total Suspended Solids (TSS)	mg/L	Quarterly	50 milligrams per litre for Points 14 & 15 only			31		1	222			11
Volatile Organic Compounds (VOCs)	mg/L	Annual						1				
Xylenes	mg/L	Annual						1				
Zinc	mg/L	Annual / Quarterly		0.012		0.008	0.008	1	0.211			0.011

FIELD MEASUREMENTS

Standing Water Level	metres below top of casing (TOC)	Quarterly		2.19	-	-	-	1	-	38.34	16.22	-
Electrical Conductivity	microsiemens per centimetre	Quarterly		2424	782	171.1	530.9	1	1685	1130	485.7	159.2
PH	PH Units	Quarterly		6.97	8.41	7.74	7.45	1	8.03	5.63	5.6	8.02
Temp	Degrees Celcius	Quarterly		17.6	24.9	23.9	19.1	1	26.9	18.8	19.4	20.3

1 - EPA5 unable to be collected due to the localions being dry at the time of sampling

