





**Bowral Waste Centre**  
**EPA Licence No: 13366**  
**Monitoring Point 2**

(UTM Zone 56: 262080.407 East, 6180766.636 North)

Leachate Quality Monitoring

Leachate holding dam as identified in Licence Variation Application to the EPA on 10 February 2021 - Proposed monitoring points - CM  
 Sampling frequency: Yearly

Pollutant	Unit of Measure	100 Percentile Concentration Limit	No. of Samples Required by Licence	Total no. of samples collected and analysed	Results
					14/05/2024
Alkalinity (as CaCO <sub>3</sub> )	mg/L	<i>No concentration limits apply - sampling for monitoring purposes only</i>	1	1	799
Aluminium (Al)	mg/L		1	1	0.71
Arsenic (As)	mg/L		1	1	0.01
Barium (Ba)	mg/L		1	1	0.358
Benzene	mg/L		1	1	0.05
Cadmium (Cd)	mg/L		1	1	0.00005
Calcium (Ca)	mg/L		1	1	161
Chemical Oxygen Demand	mg/L		1	1	220
Cobalt	mg/L		1	1	0.011
Chromium (total hexavalent)	mg/L		1	1	0.05
Chromium (total)	mg/L		1	1	0.042
Chloride (Cl)	mg/L		1	1	136
Conductivity	(µS/cm)		1	1	2240
Copper (Cu)	mg/L		1	1	0.025
Dissolved Organic Carbon	mg/L		1	1	75
Ethyl Benzene	mg/L		1	1	0.001
Fluoride (F)	mg/L		1	1	0.6
Lead (Pb)	mg/L		1	1	0.004
Magnesium (Mg)	mg/L		1	1	68
Manganese(Mn)	mg/L		1	1	1.06
Mercury (Hg)	mg/L		1	1	0.00005
Nitrate + Nitrite	mg/L		1	1	10.3
Nitrogen as Ammonia (NH <sub>3</sub> )	mg/L		1	1	80.1
Organochlorine Pesticides	mg/L		1	1	0.00025
Organophosphate Pesticides	mg/L		1	1	0.00025
pH	pH Units		1	1	7.97
Phosphate (PO <sub>4</sub> )	mg/L		1	1	0.2
Phosphorus (P)	mg/L		1	1	0.2
Polychlorinated biphenyls (mg/L)	mg/L		1	1	0.0005
Polycyclic Aromatic Hydrocarbons (mg/L)	mg/L		1	1	0.00025
Potassium (K)	mg/L		1	1	33
Sodium (Na)	mg/L		1	1	103
Sulfate (SO <sub>4</sub> )	mg/L	1	1	272	
Toluene	mg/L	1	1	0.001	
Total Iron (Fe)	mg/L	1	1	2.58	
Total Petroleum Hydrocarbons	mg/L	1	1	0.52	

Total Phenolics	mg/L		1	1	0.025
Xylene	mg/L		1	1	0.001
Zinc (Zn)	mg/L		1	1	0.086

*BDL \*Below detection limit.*

**Bowral Waste Centre**

**EPA Licence No: 13366**

**Monitoring Point 3**

(Zone 56: 262079.587 East, 6180676.705 North)

Groundwater Quality Monitoring

Groundwater monitoring location P1-A as identified in Licence Variation Application to the EPA on 10 February 2021 - Proposed monitoring points - CM9 DOC 21/142907

Sampling frequency: Every 6 months

Pollutant	Unit of Measure	100 Percentile Concentration Limit	No. of Samples Required by Licence	Total no. of samples collected and analysed	Lowest sample value	Highest sample value	Mean of samples	Results	
								24/04/2024	17/10/2024
Alkalinity (as CaCO <sub>3</sub> )	mg/L	<i>No concentration limits apply - sampling for monitoring purposes only</i>	1	1	770	788	779	788	770
Aluminium (Al)	mg/L		1	1	0.005	0.005	0	0.005	<0.05
Calcium (Ca)	mg/L		1	1	140	142	141	142	140
Chloride (Cl)	mg/L		1	1	84	85	85	84	85
Conductivity	(µS/cm)		1	1	1100	1440	1270	1440	1100
Copper (Cu)	mg/L		1	1	0.0005	0.0005	0	0.0005	<0.001
Fluoride (F)	mg/L		1	1	0.3	0.3	0	0.3	0.3
Iron	mg/L		1	1	0.025	0.19	0	0.025	0.19
Lead (Pb)	mg/L		1	1	0.0005	0.0005	0	0.0005	<0.001
Magnesium (Mg)	mg/L		1	1	96	100	98	96	100
Manganese (Mn)	mg/L		1	1	0.119	0.12	0	0.119	0.12
Nitrate	mg/L		1	1	0.07	0.12	0	0.07	0.12
Nitrogen as Ammonia (NH <sub>3</sub> )	mg/L		1	1	0.26	0.5	0	0.5	0.26
pH	pH Units		1	1	7.6	7.92	8	7.92	7.6
Potassium (K)	mg/L		1	1	9.2	10	10	10	9.2
Sodium (Na)	mg/L		1	1	63	68	66	63	68
Standing Water Level	metres		1	1	19.2	27.35	23	19.2	27.35
Sulfate (SO <sub>4</sub> )	mg/L		1	1	11	14	13	11	14
Total dissolved solids	mg/L		1	1	746	810	778	746	810
Total organic carbon	mg/L		1	1	0.5	0.5	1	0.5	<5
Total Phenolics	mg/L	1	1	0.025	0.025	0	0.025	<0.05	
Zinc (Zn)	mg/L	1	1	0.028	0.055	0	0.028	0.055	

BDL\*Below detection limit.

**EPA Licence No: 13366**

**Monitoring Point 4**

(Zone 56: 262079.587 East, 6180676.705 North)

Groundwater Quality Monitoring

Groundwater monitoring location P1-A as identified in Licence Variation Application to the EPA on 10 February 2021 - Proposed monitoring points - CM9 DOC 21/142907

Sampling frequency: Every 6 months

Pollutant	Unit of Measure	100 Percentile Concentration Limit	No. of Samples Required by Licence	Total no. of samples collected and analysed	Lowest sample value	Highest sample value	Mean of samples	Results	
								24/04/2024	17/10/2024
Alkalinity (as CaCO <sub>3</sub> )	mg/L	<i>No concentration limits apply - sampling for monitoring purposes only</i>	1	1	160	214	187	214	160
Aluminium (Al)	mg/L		1	1	0.005	0.005	0	0.005	<0.05
Calcium (Ca)	mg/L		1	1	38	48	43	48	38
Chloride (Cl)	mg/L		1	1	92	103	98	103	92
Conductivity	(µS/cm)		1	1	530	690	610	690	530
Copper (Cu)	mg/L		1	1	0.011	0.011	0	0.011	<0.001
Fluoride (F)	mg/L		1	1	0.1	0.1	0	0.1	0.1
Iron	mg/L		1	1	0.025	0.025	0	0.025	<0.05
Lead (Pb)	mg/L		1	1	0.0005	0.0005	0	0.0005	<0.001
Magnesium (Mg)	mg/L		1	1	27	37	32	37	27
Manganese (Mn)	mg/L		1	1	0.01	0.01	0	0.01	<0.005
Nitrate	mg/L		1	1	0.08	0.24	0	0.08	0.24
Nitrogen as Ammonia (NH <sub>3</sub> )	mg/L		1	1	0.07	0.07	0	0.07	<0.01
pH	pH Units		1	1	6.7	7.54	7	7.54	6.7
Potassium (K)	mg/L		1	1	2.7	4	3	4	2.7
Sodium (Na)	mg/L		1	1	39	39	39	39	39
Standing Water Level	metres		1	1	32.85	36.38	35	32.85	36.38
Sulfate (SO <sub>4</sub> )	mg/L		1	1	8.5	10	9	10	8.5
Total dissolved solids	mg/L		1	1	330	376	353	376	330
Total organic carbon	mg/L		1	1	0.5	0.5	1	0.5	<5
Total Phenolics	mg/L	1	1	0.025	0.025	0	0.025	<0.05	
Zinc (Zn)	mg/L	1	1	0.0025	0.0025	0	0.0025	<0.005	

*BDL\*Below detection limit.*

**EPA Licence No: 13366**

**Monitoring Point 5**

(Zone 56: 262079.587 East, 6180676.705 North)

Groundwater Quality Monitoring

Groundwater monitoring location P1-A as identified in Licence Variation Application to the EPA on 10 February 2021 - Proposed monitoring points - CM9 DOC 21/142907

Sampling frequency: Every 6 months

Pollutant	Unit of Measure	100 Percentile Concentration Limit	No. of Samples Required by Licence	Total no. of samples collected and analysed	Lowest sample value	Highest sample value	Mean of samples	Results	
								24/04/2024	17/10/2024
Alkalinity (as CaCO <sub>3</sub> )	mg/L	<i>No concentration limits apply - sampling for monitoring purposes only</i>	1	2	210	212	211	212	210
Aluminium (Al)	mg/L		1	2	0.005	0.005	0	0.005	<0.05
Calcium (Ca)	mg/L		1	2	49	55	52	55	49
Chloride (Cl)	mg/L		1	2	35	42	39	42	35
Conductivity	(µS/cm)		1	2	630	670	650	670	630
Copper (Cu)	mg/L		1	2	0.0005	0.0005	0.00	0.0005	<0.001
Fluoride (F)	mg/L		1	2	0.05	0.1	0.1	0.05	0.1
Iron	mg/L		1	2	0.025	0.025	0.0	0.025	<0.05
Lead (Pb)	mg/L		1	2	0.0005	0.0005	0.001	0.0005	<0.001
Magnesium (Mg)	mg/L		1	2	35	39	37	39	35
Manganese (Mn)	mg/L		1	2	0.32	0.371	0.346	0.371	0.32
Nitrate	mg/L		1	2	0.06	0.08	0.070	0.06	0.08
Nitrogen as Ammonia (NH <sub>3</sub> )	mg/L		1	2	0.02	0.02	0	0.02	<0.01
pH	pH Units		1	2	6.8	7.3	7.05	7.3	6.8
Potassium (K)	mg/L		1	2	3.7	4	4	4	3.7
Sodium (Na)	mg/L		1	2	31	32	32	31	32
Standing Water Level	metres		1	2	18.1	18.2	18	18.1	18.2
Sulfate (SO <sub>4</sub> )	mg/L		1	2	85	110	98	110	85
Total dissolved solids	mg/L		1	2	366	430	398	366	430
Total organic carbon	mg/L		1	2	2	2	2	2	<5
Total Phenolics	mg/L	1	2	0.025	0.025	0	0.025	<0.05	
Zinc (Zn)	mg/L	1	2	0.007	0.008	0.008	0.007	0.008	

*BDL\*Below detection limit.*

**EPA Licence No: 13366**

**Monitoring Point 6**

(Zone 56: 262079.587 East, 6180676.705 North)

Groundwater Quality Monitoring

Groundwater monitoring location P1-A as identified in Licence Variation Application to the EPA on 10 February 2021 - Proposed monitoring points - CM9 DOC 21/142907

Sampling frequency: Every 6 months

Pollutant	Unit of Measure	100 Percentile Concentration Limit	No. of Samples Required by Licence	Total no. of samples collected and analysed	Lowest sample value	Highest sample value	Mean of samples	Results	
								24/04/2024	17/10/2024
Alkalinity (as CaCO <sub>3</sub> )	mg/L	<i>No concentration limits apply - sampling for monitoring purposes only</i>	1	2	160	163	162	163	160
Aluminium (Al)	mg/L		1	2	0.005	0.005	0	0.005	<0.05
Calcium (Ca)	mg/L		1	2	36	37	37	37	36
Chloride (Cl)	mg/L		1	2	80	85	83	85	80
Conductivity	(µ/cm)		1	2	530	560	545	560	530
Copper (Cu)	mg/L		1	2	0.0005	0.0005	0	0.0005	<0.001
Fluoride (F)	mg/L		1	2	0.1	0.1	0	0.1	0.1
Iron	mg/L		1	2	30	30	30	30	<0.05
Lead (Pb)	mg/L		1	2	0.0005	0.0005	0	0.0005	<0.001
Magnesium (Mg)	mg/L		1	2	27	30	29	30	27
Manganese (Mn)	mg/L		1	2	0.0005	0.0005	0	0.0005	<0.005
Nitrate	mg/L		1	2	0.16	0.26	0	0.16	0.26
Nitrogen as Ammonia (NH <sub>3</sub> )	mg/L		1	2	0.02	0.02	0	0.02	<0.01
pH	pH Units		1	2	7.2	7.54	7	7.54	7.2
Potassium (K)	mg/L		1	2	2.6	3	3	3	2.6
Sodium (Na)	mg/L		1	2	34	37	36	34	37
Standing Water Level	metres		1	2	33.2	33.54	33	33.2	33.54
Sulfate (SO <sub>4</sub> )	mg/L		1	2	7.1	8	8	8	7.1
Total dissolved solids	mg/L		1	2	292	340	316	292	340
Total organic carbon	mg/L		1	2	0.5	0.5	1	0.5	<5
Total Phenolics	mg/L	1	2	0.025	0.025	0	0.025	<0.05	
Zinc (Zn)	mg/L	1	2	0.0025	0.0025	0	0.0025	<0.005	

*BDL\*Below detection limit.*



**EPA Licence No: 13366**

**Monitoring Point 7**

(Zone 56: 262079.587 East, 6180676.705 North)

Groundwater Quality Monitoring

Groundwater monitoring location P1-A as identified in Licence Variation Application to the EPA on 10 February 2021 - Proposed monitoring points - CM9 DOC 21/142907

Sampling frequency: Every 6 months

Pollutant	Unit of Measure	100 Percentile Concentration Limit	No. of Samples Required by Licence	Total no. of samples collected and analysed	Lowest sample value	Highest sample value	Mean of samples	Results	
								24/04/2024	17/10/2024
Alkalinity (as CaCO <sub>3</sub> )	mg/L	<i>No concentration limits apply - sampling for monitoring purposes only</i>	1	2	210	220	215	220	210
Aluminium (Al)	mg/L		1	2	0.005	0.005	0	0.005	<0.05
Calcium (Ca)	mg/L		1	2	49	51	50	51	49
Chloride (Cl)	mg/L		1	2	110	116	113	116	110
Conductivity	(µS/cm)		1	2	680	707	694	707	680
Copper (Cu)	mg/L		1	2	0.0005	0.0005	0.00	0.0005	<0.001
Fluoride (F)	mg/L		1	2	0.3	0.3	0.3	0.3	0.3
Iron	mg/L		1	2	0.025	0.14	0.1	0.025	0.14
Lead (Pb)	mg/L		1	2	0.0005	0.0005	0.001	0.0005	<0.001
Magnesium (Mg)	mg/L		1	2	32	34	33	34	32
Manganese (Mn)	mg/L		1	2	0.94	1.22	1.080	1.22	0.94
Nitrate	mg/L		1	2	0.02	0.07	0.045	0.02	0.07
Nitrogen as Ammonia (NH <sub>3</sub> )	mg/L		1	2	0.03	0.2	0	0.2	0.03
pH	pH Units		1	2	7	7.39	7.20	7.39	7
Potassium (K)	mg/L		1	2	5.2	6	6	6	5.2
Sodium (Na)	mg/L		1	2	45	48	47	45	48
Standing Water Level	metres		1	2	28.62	28.71	29	28.62	28.71
Sulfate (SO <sub>4</sub> )	mg/L		1	2	2.3	4	3	4	2.3
Total dissolved solids	mg/L		1	2	374	420	397	374	420
Total organic carbon	mg/L		1	2	0.5	0.5	1	0.5	<5
Total Phenolics	mg/L	1	2	0.025	0.025	0	0.025	<0.05	
Zinc (Zn)	mg/L	1	2	0.0025	0.0025	0.003	0.0025	<0.005	

\*Below detection limit.

**EPA Licence No: 13366**

**Monitoring Point 8**

(Zone 56: 262079.587 East, 6180676.705 North)

Groundwater Quality Monitoring

Groundwater monitoring location P1-A as identified in Licence Variation Application to the EPA on 10 February 2021 - Proposed monitoring points - CM9 DOC 21/142907

Sampling frequency: Every 6 months

Pollutant	Unit of Measure	100 Percentile Concentration Limit	No. of Samples Required by Licence	Total no. of samples collected and analysed	Lowest sample value	Highest sample value	Mean of samples	Results	
								24/04/2024	17/10/2024
Alkalinity (as CaCO <sub>3</sub> )	mg/L	<i>No concentration limits apply - sampling for monitoring purposes only</i>	1	1	167	167	167	167	170
Aluminium (Al)	mg/L		1	2	0.01	0.01	0	0.01	<0.05
Calcium (Ca)	mg/L		1	1	35	35	35	35	32
Chloride (Cl)	mg/L		1	1	65	65	65	65	62
Conductivity	(µS/cm)		1	1	497	497	497	497	490
Copper (Cu)	mg/L		1	2	0.0005	0.0005	0.00	0.0005	<0.001
Fluoride (F)	mg/L		1	1	0.1	0.1	0.1	0.1	0.1
Iron	mg/L		1	2	0.025	0.025	0.0	0.025	<0.05
Lead (Pb)	mg/L		1	2	0.0005	0.0005	0.001	0.0005	<0.001
Magnesium (Mg)	mg/L		1	1	24	24	24	24	22
Manganese (Mn)	mg/L		1	1	0.022	0.022	0.022	0.022	<0.005
Nitrate	mg/L		1	2	0.09	0.09	0.090	0.09	0.59
Nitrogen as Ammonia (NH <sub>3</sub> )	mg/L		1	1	0.07	0.07	0	0.07	<0.01
pH	pH Units		1	1	7.15	7.15	7.15	7.15	6.7
Potassium (K)	mg/L		1	1	5	5	5	5	4.1
Sodium (Na)	mg/L		1	1	36	36	36	36	38
Standing Water Level	metres		1	1	34.7	34.7	35	34.7	33.74
Sulfate (SO <sub>4</sub> )	mg/L		1	1	4	4	4	4	3.2
Total dissolved solids	mg/L		1	1	250	250	250	250	270
Total organic carbon	mg/L		1	2	0	0	1	0.5	<5
Total Phenolics	mg/L	1	2	0	0	0	0.025	<0.05	
Zinc (Zn)	mg/L	1	1	0.014	0.014	0.014	0.014	0.005	

\*Below detection limit.

