

KOOTINGAL LANDFILL - YEARLY SUMMARY FOR 2022/2023

Licence Number - 6013

Kootingal Solid Waste Landfill - New England Highway, Kootingal NSW, 2352 Licencee - Tamworth Regional Council

Council

Public Register

<https://www.epa.nsw.gov.au/licensing-and-regulation/public-registers>

LICENCE PERIOD:

17th Oct 2022 - 16th Oct 2023

PQL = Practical Quantitation Limit LOR = Limit of Reporting

N/A = not applicable

Point 1 - Surface Area

Concentration Limits: Point 1: TSS (Total Suspended Solids) - 50mg/L, 100 percentile concentration limit

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	m g/L	Special Frequency 1				
Calcium	m g/L	Special Frequency 1				
Chloride	m g/L	Special Frequency 1				
Chromium (Hexavalent)	m g/L	Special Frequency 1				
Conductivity (In situ)	µS/cm	Special Frequency 1				
Dissolved Oxygen (In situ)	m g/L	Special Frequency 1				
Fluoride	m g/L	Special Frequency 1				
Iron	m g/L	Special Frequency 1				
Magnesium	m g/L	Special Frequency 1				
Manganese	m g/L	Special Frequency 1				
Nitrate	m g/L	Special Frequency 1				
Nitrite	m g/L	Special Frequency 1				
Nitrogen (ammonia)	m g/L	Special Frequency 1				
pH (In situ)	pH Units	Special Frequency 1				
Potassium	m g/L	Special Frequency 1				
Sodium	m g/L	Special Frequency 1				
Sulfate	m g/L	Special Frequency 1				
Temperature (In situ)	oC	Special Frequency 1				
Total Kjeldahl Nitrogen	m g/L	Special Frequency 1				
Total Organic Carbon	m g/L	Special Frequency 1				
Total Phenolics	µg/L	Special Frequency 1				
Total Suspended Solids	m g/L	Special Frequency 1				
Volumetric Flow Rate	KL/Day	Special Frequency 1				
Zinc	m g/L	Special Frequency 1				
Organochlorine Pesticides	µg/L	Special Frequency 1				
Organophosphate Pesticides	µg/L	Special Frequency 1				

NOTE: Special Frequency 1 - once in each 6-monthly period at a time of stormwater discharge

Point 2 - Leachate Pond

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			15/12/2022	15/03/2023	3/07/2023	27/09/2023
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			15/12/2023	30/03/2023	5/07/2023	10/10/2023
Value	Value	Value	Value			
Alkalinity (as calcium carbonate)	m g/L	Quarterly	DRY	157	215	DRY
Calcium	m g/L	Quarterly	DRY	51	46	DRY
Chloride	m g/L	Quarterly	DRY	32	47	DRY
Chromium (Hexavalent)	m g/L	Quarterly	DRY	< 0.01	< 0.01	DRY
Conductivity (In situ)	µS/cm	Quarterly	DRY	0.72	0.7	DRY
Dissolved Oxygen (In situ)	m g/L	Quarterly	DRY	5.6	11.6	DRY
Fluoride	m g/L	Quarterly	DRY	0.014	< 1	DRY
Iron	m g/L	Quarterly	DRY	1.01	1.99	DRY
Magnesium	m g/L	Quarterly	DRY	15	16	DRY
Manganese	m g/L	Quarterly	DRY	0.204	0.254	DRY
Nitrate	m g/L	Quarterly	DRY	< 0.1	< 1	DRY
Nitrite	m g/L	Quarterly	DRY	< 0.1	< 1	DRY
Nitrogen (ammonia)	m g/L	Quarterly	DRY	< 0.1	< 0.1	DRY
pH (In situ)	pH Units	Quarterly	DRY	9.5	8.8	DRY
Potassium	m g/L	Quarterly	DRY	116	115	DRY
Sodium	m g/L	Quarterly	DRY	23	33	DRY
Sulfate	m g/L	Quarterly	DRY	144	46	DRY
Temperature (In situ)	oC	Quarterly	DRY	29	18	DRY
Total Kjeldahl Nitrogen	m g/L	Quarterly	DRY	8.4	5.9	DRY
Total Organic Carbon	m g/L	Quarterly	DRY	68	69	DRY
Total Phenolics	µg/L	Quarterly	DRY	< 0.05	< 0.05	DRY

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Total Suspended Solids	m g/L	Quarterly	DRY	42	181	DRY
Zinc	m g/L	Quarterly	DRY	0.01	0.035	DRY
Organochlorine Pesticides	µg/L	Quarterly	DRY	< 0.5	< 0.5	DRY
Organophosphate Pesticides	µg/L	Quarterly	DRY	< 0.5	< 0.5	DRY

Point 3 - Leachate Overflow Point

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	m g/L	Special Frequency 2				
Calcium	m g/L	Special Frequency 2				
Chloride	m g/L	Special Frequency 2				
Chromium (Hexavalent)	m g/L	Special Frequency 2				
Conductivity (In Situ)	µS/cm	Special Frequency 2				
Dissolved Oxygen (In Situ)	m g/L	Special Frequency 2				
Fluoride	m g/L	Special Frequency 2				
Iron	m g/L	Special Frequency 2				
Magnesium	m g/L	Special Frequency 2				
Manganese	m g/L	Special Frequency 2				
Nitrate	m g/L	Special Frequency 2				
Nitrite	m g/L	Special Frequency 2				
Nitrogen (ammonia)	m g/L	Special Frequency 2				
pH (In Situ)	pH Units	Special Frequency 2				
Potassium	m g/L	Special Frequency 2				
Sodium	m g/L	Special Frequency 2				
Sulfate	m g/L	Special Frequency 2				
Temperature (In Situ)	°C	Special Frequency 2				
Total Kjeldahl Nitrogen	m g/L	Special Frequency 2				
Total Organic Carbon	m g/L	Special Frequency 2				
Total Phenolics	µg/L	Special Frequency 2				
Total Suspended Solids	m g/L	Special Frequency 2				
Volumetric Flow Rate (estimate)	KL/Day	Special Frequency 2				
Zinc	m g/L	Special Frequency 2				
Organochlorine Pesticides	µg/L	Special Frequency 2				
Organophosphate Pesticides	µg/L	Special Frequency 2				

NOTE: Special Frequency 2 - once in the first 24 hours after detection of the discharge and then weekly whilst the discharge continues

Point 4 - Groundwater Monitoring Bore - BH1

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			15/12/2022	16/03/2023	21/06/2023	27/09/2023
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			15/12/2022	16/03/2023	5/07/2023	10/10/2023
Value	Value	Value	Value			
Alkalinity (as calcium carbonate)	m g/L	Quarterly	298	273	125	210
Biological Oxygen Demand	m g/L	Quarterly	2	<5	<2	<2
Calcium	m g/L	Quarterly	60	64	31	59
Chloride	m g/L	Quarterly	79	74	40	58
Fluoride	m g/L	Quarterly	1.46	1.22	<1	0.71
Iron	m g/L	Quarterly	0.12	0.9	0.26	4.75
Magnesium	m g/L	Quarterly	49	52	23	38
Manganese	m g/L	Quarterly	0.628	0.443	0.879	1.09
Nitrate	m g/L	Quarterly	8.08	13.91	6.85	11.86
Nitrogen (ammonia)	m g/L	Quarterly	0.07	<0.1	<0.1	<0.5
pH (In Situ)	pH Units	Quarterly	6.85	6.7	6.5	6.6
Potassium	m g/L	Quarterly	11	11	6	7
Sodium	m g/L	Quarterly	54	53	33	53
Sulfate	m g/L	Quarterly	26	39	25	31
Total Dissolved Solids	m g/L	Quarterly	528	724	388	588
Total Organic Carbon	m g/L	Quarterly	2	30	29	24
Total Phenolics	µg/L	Quarterly	<0.05	<0.05	29	< 0.05
Organochlorine Pesticides	µg/L	Yearly	<PQL	<PQL	<PQL	<PQL
Organophosphate Pesticides	µg/L	Yearly	<PQL	<PQL	<PQL	<PQL

Point 5 - Groundwater Bore BH2

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			15/12/2022	10/05/2023	21/06/2023	27/09/2023
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained

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			4/01/2023	10/05/2023	5/07/2023	10/10/2023
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	m g/L	Quarterly	646	625	633	607
Biological Oxygen Demand	m g/L	Quarterly	<5	< 2	<2	<2
Calcium	m g/L	Quarterly	177	174	172	88
Chloride	m g/L	Quarterly	256	225	224	191
Fluoride	m g/L	Quarterly	1.21	1.24	<1	1.25
Iron	m g/L	Quarterly	0.59	0.3	0.07	1.28
Magnesium	m g/L	Quarterly	124	106	107	104
Manganese	m g/L	Quarterly	4.03	2.00	2.14	5.84
Nitrate	m g/L	Quarterly	14.8	15.20	13.68	12.07
Nitrogen (ammonia)	m g/L	Quarterly	37.8	< 0.1	<0.1	<0.5
pH (In Situ)	pH Units	Quarterly	6.9	7.0	9.1	6.7
Potassium	m g/L	Quarterly	10	10	<5	9
Sodium	m g/L	Quarterly	236	203	199	195
Sulfate	m g/L	Quarterly	427	308	325	267
Total Dissolved Solids	m g/L	Quarterly	544	1112	2,968	1,460
Total Organic Carbon	m g/L	Quarterly	9	5	7	9
Total Phenolics	µg/L	Quarterly	<0.05	0.11	< 0.05	< 0.05
Organochlorine Pesticides	µg/L	Yearly	<PQL	<PQL	<PQL	<PQL
Organophosphate Pesticides	µg/L	Yearly	<PQL	<PQL	<PQL	<PQL

Point 6 - Groundwater Bore BH3

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			15/12/2022	10/05/2023	21/06/2023	29/07/2023
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			4/01/2023	10/05/2023	5/07/2023	
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	m g/L	Quarterly	774	628	581	539
Biological Oxygen Demand	m g/L	Quarterly	<2	< 2	<2	<2
Calcium	m g/L	Quarterly	190	132	103	93
Chloride	m g/L	Quarterly	261	131	71	54
Fluoride	m g/L	Quarterly	1.32	1.46	1.63	1.62
Iron	m g/L	Quarterly	<0.05	0.10	0.07	1.58
Magnesium	m g/L	Quarterly	125	83	68	57
Manganese	m g/L	Quarterly	0.533	0.606	0.544	0.753
Nitrate	m g/L	Quarterly	0.73	4.50	<1	0.85
Nitrogen (ammonia)	m g/L	Quarterly	0.02	< 0.1	< 0.1	<0.5
pH (In Situ)	pH Units	Quarterly	6.8	6.9	6.9	6.9
Potassium	m g/L	Quarterly	12	10	11	8
Sodium	m g/L	Quarterly	168	149	117	110
Sulfate	m g/L	Quarterly	255	145	75	42
Total Dissolved Solids	m g/L	Quarterly	1428	1448	2060	748
Total Organic Carbon	m g/L	Quarterly	15	8	8	14
Total Phenolics	µg/L	Quarterly	<0.05	0.11	< 0.6	< 0.05
Organochlorine Pesticides	µg/L	Yearly	<PQL	<PQL	<PQL	<PQL
Organophosphate Pesticides	µg/L	Yearly	<PQL	<PQL	<PQL	<PQL

Point 7 - Groundwater Bore BH4

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			15/12/2022	10/05/2023	21/06/2023	29/09/2023
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			4/01/2023	29/05/2023	4/07/2023	
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	m g/L	Quarterly	DRY	DRY	DRY	DRY
Biological Oxygen Demand	m g/L	Quarterly	DRY	DRY	DRY	DRY
Calcium	m g/L	Quarterly	DRY	DRY	DRY	DRY
Chloride	m g/L	Quarterly	DRY	DRY	DRY	DRY
Fluoride	m g/L	Quarterly	DRY	DRY	DRY	DRY
Iron	m g/L	Quarterly	DRY	DRY	DRY	DRY
Magnesium	m g/L	Quarterly	DRY	DRY	DRY	DRY
Manganese	m g/L	Quarterly	DRY	DRY	DRY	DRY
Nitrate	m g/L	Quarterly	DRY	DRY	DRY	DRY
Nitrogen (ammonia)	m g/L	Quarterly	DRY	DRY	DRY	DRY
pH (In Situ)	pH Units	Quarterly	DRY	DRY	DRY	DRY
Potassium	m g/L	Quarterly	DRY	DRY	DRY	DRY
Sodium	m g/L	Quarterly	DRY	DRY	DRY	DRY
Sulfate	m g/L	Quarterly	DRY	DRY	DRY	DRY
Total Dissolved Solids	m g/L	Quarterly	DRY	DRY	DRY	DRY

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Total Organic Carbon	m g/L	Quarterly	DRY	DRY	DRY	DRY
Total Phenolics	µg/L	Quarterly	DRY	DRY	DRY	DRY
Organochlorine Pesticides	µg/L	Yearly	DRY	DRY	DRY	DRY
Organophosphate Pesticides	µg/L	Yearly	DRY	DRY	DRY	DRY