

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 2023 - 16th Oct 2024

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
			06.12.2023	13.03.2024	13.06.2024	12.09.2024
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			19.12.2023	27.03.2024	25.06.2024	25.09.2024
Value	Value	Value	Value			
Alkalinity (as calcium carbonate)	m g/L	Quarterly	193	DRY	168	175
Calcium	m g/L	Quarterly	42	DRY	44	38
Chloride	m g/L	Quarterly	27	DRY	36	37
Chromium (Hexavalent)	m g/L	Quarterly	<0.01	DRY	< 0.01	< 0.01
Conductivity (In situ)	µS/cm	Quarterly	0.58	DRY	0.7	0.54
Dissolved Oxygen (In situ)	m g/L	Quarterly	8.1	DRY	9.5	9.4
Fluoride	m g/L	Quarterly	0.14	DRY	0.17	< 1
Iron	m g/L	Quarterly	0.64	DRY	0.75	0.116
Magnesium	m g/L	Quarterly	13	DRY	10	9
Manganese	m g/L	Quarterly	0.117	DRY	0.091	0.116
Nitrate	m g/L	Quarterly	<0.1	DRY	< 0.01	< 1
Nitrite	m g/L	Quarterly	<0.1	DRY	< 0.01	< 1
Nitrogen (ammonia)	m g/L	Quarterly	<0.5	DRY	4.9	< 0.10
pH (In situ)	pH Units	Quarterly	7.9	DRY	8	7.8
Potassium	m g/L	Quarterly	85	DRY	85	74
Sodium	m g/L	Quarterly	29	DRY	52	26
Sulfate	m g/L	Quarterly	24	DRY	16	43
Temperature (In situ)	oC	Quarterly	24	DRY	14	22
Total Kjeldahl Nitrogen	m g/L	Quarterly	4.5	DRY	4.9	4.9
Total Organic Carbon	m g/L	Quarterly	59	DRY	37	40
Total Phenolics	µg/L	Quarterly	<0.05	DRY	< 0.05	< 0.050

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Total Suspended Solids	m g/L	Quarterly	20	DRY	27	31
Zinc	m g/L	Quarterly	<0.005	DRY	0.005	0.009
Organochlorine Pesticides	µg/L	Quarterly	<0.5	DRY	< 0.5	< 0.5
Organophosphate Pesticides	µg/L	Quarterly	<.05	DRY	< 0.5	< 0.5

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
			27.09.2023	06.12.2023	13.03.2024	13.06.2024
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			10.10.2023	19.12.2023	27.03.2024	02.07.2024
Value	Value	Value	Value			
Alkalinity (as calcium carbonate)	m g/L	Quarterly	210	320	289	64
Biological Oxygen Demand	m g/L	Quarterly	<2	<2	<2	3
Calcium	m g/L	Quarterly	59	126	105	21
Chloride	m g/L	Quarterly	58	134	116	30
Fluoride	m g/L	Quarterly	0.71	1.11	<1	<.10
Iron	m g/L	Quarterly	4.75	0.36	0.17	4.4
Magnesium	m g/L	Quarterly	38	97	80	8
Manganese	m g/L	Quarterly	1.09	0.594	0.529	0.097
Nitrate	m g/L	Quarterly	11.86	49.25	50.81	0.78
Nitrogen (ammonia)	m g/L	Quarterly	<0.5	<0.5	<0.5	<0.10
pH (In Situ)	pH Units	Quarterly	6.6	6.4	6.5	6.2
Potassium	m g/L	Quarterly	7	15	17	6
Sodium	m g/L	Quarterly	53	110	73	42
Sulfate	m g/L	Quarterly	31	56	71	<2
Total Dissolved Solids	m g/L	Quarterly	588	1184	996	204
Total Organic Carbon	m g/L	Quarterly	24	29	27	21
Total Phenolics	µg/L	Quarterly	<0.5	<0.5	<1	<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
			27.09.2023	06.12.2023	13.03.2024	13.06.2024
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			Value	Value	Value	Value

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			10.10.2023	19.12.2023	27.03.2024	02.07.2024
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	m g/L	Quarterly	607	660	630	621
Biological Oxygen Demand	m g/L	Quarterly	<2	2	2	<2
Calcium	m g/L	Quarterly	88	150	163	143
Chloride	m g/L	Quarterly	191	172	200	150
Fluoride	m g/L	Quarterly	1.25	1.27	1.25	1.16
Iron	m g/L	Quarterly	1.28	4.26	1.5	0.6
Magnesium	m g/L	Quarterly	104	108	88	88
Manganese	m g/L	Quarterly	5.84	3.28	3.76	3.76
Nitrate	m g/L	Quarterly	12.07	14.23	11.46	8.16
Nitrogen (ammonia)	m g/L	Quarterly	<0.5	<0.5	< 0.5	<1
pH (In Situ)	pH Units	Quarterly	6.7	6.7	6.8	6.6
Potassium	m g/L	Quarterly	9	13	13	13
Sodium	m g/L	Quarterly	195	230	190	236
Sulfate	m g/L	Quarterly	267	259	240	203
Total Dissolved Solids	m g/L	Quarterly	1,460	1,456	1420	1312
Total Organic Carbon	m g/L	Quarterly	9	7	6	9
Total Phenolics	µg/L	Quarterly	<0.05	<0.05	< 1	<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
			27.09.2023	06.12.2023	13.03.2024	13.06.2024
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			10.10.2023	19.12.2023	27.03.2024	02.07.2024
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	m g/L	Quarterly	539	642	485	471
Biological Oxygen Demand	m g/L	Quarterly	<2	<2	3	<2
Calcium	m g/L	Quarterly	93	107	78	76
Chloride	m g/L	Quarterly	54	69	46	46
Fluoride	m g/L	Quarterly	1.62	1.4	1.59	1.07
Iron	m g/L	Quarterly	1.58	0.38	0.17	0.18
Magnesium	m g/L	Quarterly	57	71	41	45
Manganese	m g/L	Quarterly	0.753	0.411	0.959	0.674
Nitrate	m g/L	Quarterly	0.85	0.96	< 1	0.38
Nitrogen (ammonia)	m g/L	Quarterly	<0.5	<0.5	< 0.5	< 0.5
pH (In Situ)	pH Units	Quarterly	6.9	6.7	7.0	11.1
Potassium	m g/L	Quarterly	8	10	11	11
Sodium	m g/L	Quarterly	110	138	98	121
Sulfate	m g/L	Quarterly	42	41	25	28
Total Dissolved Solids	m g/L	Quarterly	748	916	676	646
Total Organic Carbon	m g/L	Quarterly	14	9	9	8
Total Phenolics	µg/L	Quarterly	<0.05	<0.05	< 1	< 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
			27.09.2023	06.12.2023	13.03.2024	13.06.2024
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			10.10.2023	19.12.2023	27.03.2024	02.07.2024
			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