

KOOTINGAL LANDFILL - YEARLY SUMMARY FOR 2020/21

Licence Number - 6013

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

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

LICENCE PERIOD: 17th Oct 2021 - 16th Oct 2022

PQL = Practical Quantitation Limit LOR = Limit of Reporting

NA = not applicable

Point 1 - Surface Area

Concentration Limit: Point 1: TSS (Total Suspended Solids) - 50m g/L, 100 percentile concentration limit

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

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

Point 2 - Leachate Pond

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			2/12/2021	17/03/2022	23/06/2022	15/09/2022
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			15/12/2021	28/03/2021	8/07/2022	28/09/2022
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	mg/L	Quarterly	234	212	181	204
Calcium	mg/L	Quarterly	48	36	42	45
Chloride	mg/L	Quarterly	74	63	56	50
Chromium (Hexavalent)	mg/L	Quarterly	0.01	0.01	0.01	0.1
Conductivity (In situ)	µS/cm	Quarterly	0.78	0.86	0.80	6.74
Dissolved Oxygen (In situ)	mg/L	Quarterly	5.8	5.4	10.4	12.2
Fluoride	mg/L	Quarterly	0.14	0.15	0.13	0.15
Iron	mg/L	Quarterly	0.84	1.02	1.71	0.06
Magnesium	mg/L	Quarterly	15	12	13	13
Manganese	mg/L	Quarterly	0.363	0.222	0.208	0.001
Nitrate	mg/L	Quarterly	0.1	0.01	0.1	0.1
Nitrite	mg/L	Quarterly	0.1	0.01	0.1	0.1
Nitrogen (ammonia)	mg/L	Quarterly	0.46	0.5	0.1	0.04
pH (In situ)	pH Units	Quarterly	8	8.3	8.7	8.2
Potassium	mg/L	Quarterly	122	116	106	98
Sodium	mg/L	Quarterly	40	32	28	42
Sulfate	mg/L	Quarterly	10	23	61	74
Temperature (In situ)	°C	Quarterly	23.3	21.9	11.4	14.5
Total Kjeldahl Nitrogen	mg/L	Quarterly	8.4	9.8	9.6	6.9
Total Organic Carbon	mg/L	Quarterly	90	86	83	71
Total Phenolics	µg/L	Quarterly	< 0.05	< 0.05	<0.05	<0.05
Total Suspended Solids	mg/L	Quarterly	17	22	70	21
Zinc	mg/L	Quarterly	0.01	0.15	0.01	<0.009
Organochlorine Pesticides	µg/L	Quarterly	<LOR	<LOR	<LOR	<LOR
Organophosphate Pesticides	µg/L	Quarterly	<LOR	<LOR	<LOR	<LOR

Point 3 - Leachate Overflow Point

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			25/11/2021	18/01/2022		
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			25/11/2021	27/01/2022		
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	mg/L	Special Frequency 2	206	173		
Calcium	mg/L	Special Frequency 2	44	33		
Chloride	mg/L	Special Frequency 2	70	55		
Chromium (Hexavalent)	mg/L	Special Frequency 2	< 0.01	< 0.01		
Conductivity (In Situ)	µS/cm	Special Frequency 2	0.91	0.57		
Dissolved Oxygen (In Situ)	mg/L	Special Frequency 2	5.70	7.60		
Fluoride	mg/L	Special Frequency 2	0.11	0.10		
Iron	mg/L	Special Frequency 2	1.19	1.19		
Magnesium	mg/L	Special Frequency 2	14.000	10.000		
Manganese	mg/L	Special Frequency 2	0.33	0.28		
Nitrate	mg/L	Special Frequency 2	0.1	0.56		
Nitrite	mg/L	Special Frequency 2	0.09	0.06		
Nitrogen (ammonia)	mg/L	Special Frequency 2	2.2	0.1		
pH (In Situ)	pH Units	Special Frequency 2	8	8		
Potassium	mg/L	Special Frequency 2	102	100		
Sodium	mg/L	Special Frequency 2	37	30		
Sulfate	mg/L	Special Frequency 2	10.0	1.0		
Temperature (In Situ)	°C	Special Frequency 2	22.7	22.8		
Total Kjeldahl Nitrogen	mg/L	Special Frequency 2	8	9		
Total Organic Carbon	mg/L	Special Frequency 2	83	72		
Total Phenolics	µg/L	Special Frequency 2	0.05	0.5		
Total Suspended Solids	mg/L	Special Frequency 2	38	37		
Volumetric Flow Rate (estimate)	KU/Day	Special Frequency 2	14.100	0.100		
Zinc	mg/L	Special Frequency 2	0.913	0.022		
Organochlorine Pesticides	µg/L	Special Frequency 2	< LOR	< LOR		
Organophosphate Pesticides	µg/L	Special Frequency 2	< LOR	< LOR		

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
			2/12/2021	17/03/2022	23/06/2022	15/09/2022
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			13/12/2021	28/03/2022	15/07/2022	28/09/2022
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	mg/L	Quarterly	379	339	314	271
Biological Oxygen Demand	mg/L	Quarterly	2	2	2	7
Calcium	mg/L	Quarterly	88	72	70	50

Chloride	m/g/L	Quarterly	120	117	90	70
Fluoride	m/g/L	Quarterly	1.45	1.49	1.36	1.07
Iron	m/g/L	Quarterly	0.36	0.51	0.55	0.9
Magnesium	m/g/L	Quarterly	74	60	55	41
Manganese	m/g/L	Quarterly	0.101	0.207	0.336	0.531
Nitrate	m/g/L	Quarterly	16.8	11.72	8.2	2.11
Nitrogen (ammonia)	m/g/L	Quarterly	0.01	0.1	0.2	0.04
pH (In Situ)	pH Units	Quarterly	6.6	6.5	6.7	6.6
Potassium	m/g/L	Quarterly	14	13	14	9
Sodium	m/g/L	Quarterly	71	63	58	49
Sulfate	m/g/L	Quarterly	34	22	NS	9
Total Dissolved Solids	m/g/L	Quarterly	794	704	664	662
Total Organic Carbon	m/g/L	Quarterly	23	30	30	35
Total Phenolics	µg/L	Quarterly	50	0.05	0.05	0.05
Organochlorine Pesticides	µg/L	Yearly	LGR	N/A	N/A	N/A
Organophosphate Pesticides	µg/L	Yearly	LGR	N/A	N/A	N/A

Point 5 - Groundwater Bore BH2

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			2/12/2021	17/03/2022	23/06/2022	15/09/2022
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			13/12/2021	28/03/2022	15/07/2022	28/09/2022
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	m/g/L	Quarterly	790	695	662	631
Biological Oxygen Demand	m/g/L	Quarterly	4	2	5	4
Calcium	m/g/L	Quarterly	248	195	206	185
Chloride	m/g/L	Quarterly	365	312	294	288
Fluoride	m/g/L	Quarterly	1.21	1.14	1.1	1.21
Iron	m/g/L	Quarterly	16.7	9.7	0.07	0.49
Magnesium	m/g/L	Quarterly	154	133	135	120
Manganese	m/g/L	Quarterly	5.55	5.24	4.96	3.03
Nitrate	m/g/L	Quarterly	6.85	12.30	11.2	13.5
Nitrogen (ammonia)	m/g/L	Quarterly	0.02	0.10	0.1	0.1
pH (In Situ)	pH Units	Quarterly	6.8	6.7	6.8	6.8
Potassium	m/g/L	Quarterly	23	12	14	11
Sodium	m/g/L	Quarterly	267	244	244	230
Sulfate	m/g/L	Quarterly	409	50	441	397
Total Dissolved Solids	m/g/L	Quarterly	1,366	1812	1,904	1,724
Total Organic Carbon	m/g/L	Quarterly	19	10	8	17
Total Phenolics	µg/L	Quarterly	50	0.05	0.05	0.05
Organochlorine Pesticides	µg/L	Yearly	LGR	N/A	N/A	N/A
Organophosphate Pesticides	µg/L	Yearly	LGR	N/A	N/A	N/A

12.537

Point 6 - Groundwater Bore BH3

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			1/12/2021	17/03/2022	23/06/2022	15/09/2022
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			13/12/2021	28/03/2022	15/07/2022	28/09/2022
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	m/g/L	Quarterly	725	717	739	697
Biological Oxygen Demand	m/g/L	Quarterly	2	2	2	4
Calcium	m/g/L	Quarterly	185	176	197	151
Chloride	m/g/L	Quarterly	185	218	209	168
Fluoride	m/g/L	Quarterly	1.3	1.29	1.1	1.33
Iron	m/g/L	Quarterly	0.42	0.34	0.09	0.11
Magnesium	m/g/L	Quarterly	117	117	123	102
Manganese	m/g/L	Quarterly	0.617	0.468	0.528	0.483
Nitrate	m/g/L	Quarterly	3.08	3.79	2.3	1.22
Nitrogen (ammonia)	m/g/L	Quarterly	0.01	0.1	0.1	0.01
pH (In Situ)	pH Units	Quarterly	6.7	6.7	6.8	6.7
Potassium	m/g/L	Quarterly	13	13	15	12
Sodium	m/g/L	Quarterly	160	166	170	154
Sulfate	m/g/L	Quarterly	253	262	250	170
Total Dissolved Solids	m/g/L	Quarterly	1464	1452	1480	1248
Total Organic Carbon	m/g/L	Quarterly	12	13	27	28
Total Phenolics	µg/L	Quarterly	50	0.05	0.05	0.05
Organochlorine Pesticides	µg/L	Yearly	LGR	N/A	N/A	N/A
Organophosphate Pesticides	µg/L	Yearly	LGR	N/A	N/A	N/A

Point 7 - Groundwater Bore BH4

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			2/12/2021	17/03/2022	23/06/2022	15/09/2022
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			2/12/2021	17/03/2022	23/06/2022	28/09/2022
			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
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