

KOOTINGAL LANDFILL - YEARLY SUMMARY FOR 2020/21

Licence Number - 6013

Kootingal Solid Waste Landfill - New England Highway, Kootingal NSW, 2352

Licencee - Tamworth Regional Council

Public Register

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

LICENCE PERIOD: 17th Oct 2020 - 16th Oct 2021

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
			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)	oC	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	KL/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 at a time of stormwater discharge

Point 2 - Leachate Pond

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			9/12/2020	10/03/2021		
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			21/12/2020	29/03/2021		
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	mg/L	Quarterly	366	367		
Calcium	mg/L	Quarterly	96	77		
Chloride	mg/L	Quarterly	175	151		
Chromium (Hexavalent)	mg/L	Quarterly	<0.10	<0.10		
Conductivity (In situ)	µS/cm	Quarterly	1250	1300		
Dissolved Oxygen (In situ)	mg/L	Quarterly	9.8	9.4		
Fluoride	mg/L	Quarterly	0.40	0.32		
Iron	mg/L	Quarterly	1.72	1.03		
Magnesium	mg/L	Quarterly	32	29		
Manganese	mg/L	Quarterly	0.508	0.667		
Nitrate	mg/L	Quarterly	<0.01	<0.01		
Nitrite	mg/L	Quarterly	<0.01	<0.01		
Nitrogen (ammonia)	mg/L	Quarterly	0.14	0.08		
pH (in situ)	pH Units	Quarterly	8.9	8.6		
Potassium	mg/L	Quarterly	116	149		
Sodium	mg/L	Quarterly	86	79		
Sulfate	mg/L	Quarterly	<1	<1		
Temperature (In situ)	oC	Quarterly	27.1	25.5		
Total Kjeldahl Nitrogen	mg/L	Quarterly	11.2	11.3		
Total Organic Carbon	mg/L	Quarterly	138	132		
Total Phenolics	µg/L	Quarterly	<50	<50		
Total Suspended Solids	mg/L	Quarterly	32	30		
Zinc	mg/L	Quarterly	0.012	0.006		
Organochlorine Pesticides	µg/L	Quarterly	<LOR	<LOR		
Organophosphate Pesticides	µg/L	Quarterly	<LOR	<LOR		

Point 3 - Leachate Overflow Point

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			2/11/2020	22/12/2020	30/12/2020	24/03/2021
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			12/11/2020	8/01/2021	12/01/2021	7/04/2021
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	mg/L	Special Frequency 2	165	165	272	212
Calcium	mg/L	Special Frequency 2	51	42	72	55
Chloride	mg/L	Special Frequency 2	93	86	123	84
Chromium (Hexavalent)	mg/L	Special Frequency 2	<0.01	<0.10	<1.00	<0.10
Conductivity (In Situ)	µS/cm	Special Frequency 2	750	750	1200	1100
Dissolved Oxygen (In Situ)	mg/L	Special Frequency 2	12.9	8.1	6.7	7.1
Fluoride	mg/L	Special Frequency 2	0.19	0.89	0.15	0.16
Iron	mg/L	Special Frequency 2	1.0	3.00	2.55	1.37
Magnesium	mg/L	Special Frequency 2	16	14	24	16
Manganese	mg/L	Special Frequency 2	0.232	0.196	0.319	0.267
Nitrate	mg/L	Special Frequency 2	0.28	3.45	5.68	0.90
Nitrite	mg/L	Special Frequency 2	<0.10	2.70	0.42	<0.10
Nitrogen (ammonia)	mg/L	Special Frequency 2	0.15	0.40	<0.01	0.54
pH (In Situ)	pH Units	Special Frequency 2	8.5	8.0	8.6	7.7
Potassium	mg/L	Special Frequency 2	70	89	137	97
Sodium	mg/L	Special Frequency 2	45	45	67	40
Sulfate	mg/L	Special Frequency 2	<10	<10	<10	<10
Temperature (In Situ)	°C	Special Frequency 2	21.8	22.7	25.9	19.5
Total Kjeldahl Nitrogen	mg/L	Special Frequency 2	10.6	11.2	12	68.0
Total Organic Carbon	mg/L	Special Frequency 2	106	80	111	93
Total Phenolics	µg/L	Special Frequency 2	<50	<50	<50	<50
Total Suspended Solids	mg/L	Special Frequency 2	39	75	70	69
Volumetric Flow Rate (estimate)	KL/Day	Special Frequency 2	0	1.5	1.4	0
Zinc	mg/L	Special Frequency 2	0.035	0.046	0.037	0.019
Organochlorine Pesticides	µg/L	Special Frequency 2	<LOR	<LOR	<LOR	<LOR
Organophosphate Pesticides	µg/L	Special Frequency 2	<LOR	<LOR	<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
			9/12/2020	10/03/2021		
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			21/12/2020	23/03/2021		
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	mg/L	Quarterly	389	384		
Biological Oxygen Demand	mg/L	Quarterly	<2	<2		
Calcium	mg/L	Quarterly	71	70		
Chloride	mg/L	Quarterly	57	59		
Fluoride	mg/L	Quarterly	1.57	1.61		
Iron	mg/L	Quarterly	0.08	0.12		
Magnesium	mg/L	Quarterly	58	59		
Manganese	mg/L	Quarterly	0.036	0.038		
Nitrate	mg/L	Quarterly	1.58	8.43		
Nitrogen (ammonia)	mg/L	Quarterly	6.30	<0.01		
pH (In Situ)	pH Units	Quarterly	6.7	6.7		
Potassium	mg/L	Quarterly	12	14		
Sodium	mg/L	Quarterly	79	84		
Sulfate	mg/L	Quarterly	78	78		
Total Dissolved Solids	mg/L	Quarterly	640	668		
Total Organic Carbon	mg/L	Quarterly	4	6		
Total Phenolics	µg/L	Quarterly	<50	<50		
Organochlorine Pesticides	µg/L	Yearly	<LOR	N/A		
Organophosphate Pesticides	µg/L	Yearly	<LOR	N/A		

Point 5 - Groundwater Bore BH2

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			9/12/2020	10/03/2021		
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			21/12/2020	23/03/2021		
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	mg/L	Quarterly	731	742		
Biological Oxygen Demand	mg/L	Quarterly	<2	<2		
Calcium	mg/L	Quarterly	215	219		
Chloride	mg/L	Quarterly	338	299		
Fluoride	mg/L	Quarterly	1.10	1.15		
Iron	mg/L	Quarterly	1.55	4.51		
Magnesium	mg/L	Quarterly	131	134		
Manganese	mg/L	Quarterly	3.80	4.14		
Nitrate	mg/L	Quarterly	2.25	8.76		
Nitrogen (ammonia)	mg/L	Quarterly	0.05	<0.01		
pH (In Situ)	pH Units	Quarterly	6.8	6.7		
Potassium	mg/L	Quarterly	11	14		
Sodium	mg/L	Quarterly	244	253		
Sulfate	mg/L	Quarterly	227	374		
Total Dissolved Solids	mg/L	Quarterly	1792	1844		
Total Organic Carbon	mg/L	Quarterly	7	<1		
Total Phenolics	µg/L	Quarterly	<50	<50		
Organochlorine Pesticides	µg/L	Yearly	<LOR	N/A		
Organophosphate Pesticides	µg/L	Yearly	<LOR	N/A		

Point 6 - Groundwater Bore BH3

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			9/12/2020	10/03/2021		
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			21/12/2020	23/03/2021		
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	mg/L	Quarterly	679	662		
Biological Oxygen Demand	mg/L	Quarterly	<2	<2		
Calcium	mg/L	Quarterly	189	158		
Chloride	mg/L	Quarterly	258	176		
Fluoride	mg/L	Quarterly	1.17	1.03		
Iron	mg/L	Quarterly	0.62	0.20		
Magnesium	mg/L	Quarterly	123	102		
Manganese	mg/L	Quarterly	0.636	0.471		
Nitrate	mg/L	Quarterly	1.03	1.45		
Nitrogen (ammonia)	mg/L	Quarterly	0.02	<0.01		
pH (In Situ)	pH Units	Quarterly	6.8	6.7		
Potassium	mg/L	Quarterly	12	13		
Sodium	mg/L	Quarterly	163	145		
Sulfate	mg/L	Quarterly	225	163		
Total Dissolved Solids	mg/L	Quarterly	1420	1192		
Total Organic Carbon	mg/L	Quarterly	8	6		
Total Phenolics	µg/L	Quarterly	<50	<50		
Organochlorine Pesticides	µg/L	Yearly	<LOR	N/A		
Organophosphate Pesticides	µg/L	Yearly	<LOR	N/A		

Point 7 - Groundwater Bore BH4

Pollutant	Unit of measure	Monitoring Frequency	Date Sampled	Date Sampled	Date Sampled	Date Sampled
			9/12/2020	10/03/2021		
			Date Data Obtained	Date Data Obtained	Date Data Obtained	Date Data Obtained
			21/12/2020	23/03/2021		
			Value	Value	Value	Value
Alkalinity (as calcium carbonate)	mg/L	Quarterly	DRY	DRY		
Biological Oxygen Demand	mg/L	Quarterly	DRY	DRY		
Calcium	mg/L	Quarterly	DRY	DRY		
Chloride	mg/L	Quarterly	DRY	DRY		
Fluoride	mg/L	Quarterly	DRY	DRY		
Iron	mg/L	Quarterly	DRY	DRY		
Magnesium	mg/L	Quarterly	DRY	DRY		
Manganese	mg/L	Quarterly	DRY	DRY		
Nitrate	mg/L	Quarterly	DRY	DRY		
Nitrogen (ammonia)	mg/L	Quarterly	DRY	DRY		
pH (In Situ)	pH Units	Quarterly	DRY	DRY		
Potassium	mg/L	Quarterly	DRY	DRY		
Sodium	mg/L	Quarterly	DRY	DRY		
Sulfate	mg/L	Quarterly	DRY	DRY		
Total Dissolved Solids	mg/L	Quarterly	DRY	DRY		
Total Organic Carbon	mg/L	Quarterly	DRY	DRY		
Total Phenolics	µg/L	Quarterly	DRY	DRY		
Organochlorine Pesticides	µg/L	Yearly	DRY	DRY		
Organophosphate Pesticides	µg/L	Yearly	DRY	DRY		