



Mercury	-	-	-	-	-	-	-	-
Total phosphorus	-	-	-	-	-	-	-	-

**Table notes:**

1. All measurements are in mg/L unless stated otherwise;
2. BD1 = blind field duplicate of BH3b;
3. TDS = Total Dissolved Solids; and
4. BOD = Biological Oxygen Demand; and
5. TOC = Total Organic Carbon.
6. Values with < are below the limit of reporting (LOR)



# Inverell Landfill

**Sampling Point: All Monitoring Points** **EPL No. 7463**  
**Licence Period 19 November 2018 to 18 November 2019** **Licencee: Inverell Shire Council**  
<http://www.environment.nsw.gov.au/prpoeoapp/Detail.aspx?instid=/463&id=/463&option=licence&searchrange=licence&range=POEO> **144 Otho Street, Inverell**  
**licence&prp=no&status=Issued** **Monitoring Frequency - Quarterly**

**Date Sampled** 09.Aug.19

**Date Reported** 29.Aug.19

**Date Published** 04.Sep.19

**Sampling Notes:**

The laboratory and field analysis results indicate that landfill leachate does not appear to be impacting groundwater at the monitoring locations.

All groundwater monitoring bores were sampled, however the leachate dam was dry this round, so no sample was collected.

Groundwater from the up gradient monitoring well BH1 exceeded the established threshold levels for nitrate (at 82 mg/L) and the L/N ratio (29.28).

The continuing elevated nitrate and sulphate levels detected in monitoring well BH1 is not associated with any other landfill leachate indicators. Bores down gradient of the landfill did not have these characteristics. As this monitoring well is situated up gradient of the landfill, the elevated level of nitrate could be representative of an outside regional/local influence such as agriculture.

Sampling point	BH1	BH2a	BH2b	BH3a	BH3b	BH4	BH5	BD1(BH1)
EPA Identification Numbers	6	7	8	9	10	11	12	-
pH (field)	6.82	-	6.78	6.71	6.78	6.84	6.99	-
Conductivity	1,425	-	2,952	1,810	1,305	2,891	468	-
Static Water Level	607.46	-	587.59	590.81	584.97	591.61	603.75	-
pH (lab)	6.9	-	6.9	6.9	6.9	7	6.9	6.9
TDS	1040	-	1890	1140	830	1910	305	1910
BOD	5	-	5	5	4	5	3	4
TOC	3	-	7	5	<1	10	1	9
Total Phenols	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Iron	0.06	-	0.02	0.06	0.05	0.04	0.03	0.02
Manganese	0.01	-	0.03	0.16	0.19	0.48	0.01	0.02
Sodium	54	-	290	120	125	170	49	305
Calcium	150	-	73	100	80	200	40	68
Potassium	1.7	-	1.6	0.8	3.1	2.6	0.7	1
Magnesium	145	-	280	165	90	275	19	275
Ammonia	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chloride	32	-	310	150	26	580	6	310
Fluoride	<0.1	-	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Nitrate	100	-	<0.1	<0.1	<0.1	0.31	4.8	<0.1
Sulfate	20	-	6	4	9	25	20	5
Bicarbonate	1160	-	1830	1170	1000	1390	300	1840
Phosphate	0.37	-	0.15	0.28	<0.1	<0.1	0.12	0.15
Nitrite	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Alkalinity	950	-	1500	960	820	1140	245	1510

**Table notes:**

1. All measurements are in mg/L unless stated otherwise;
2. BD1 = blind field duplicate of BH1;
3. Values preceded with < are below the limit of reporting (LOR);
4. Values in bold exceed threshold criteria;

5. \* Threshold concentration deried from background aquifer chemistry;

6. (A1) Thrieshold concentration derived from ANZECC (1992), (A2)Threshold concentration derived from ANZECC (2000); and

7. (h) Hardness Modified Trigger Value adjusted as per ANZECC/ARMCANZ (2000) Table 3.



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<http://www.environment.nsw.gov.au/prpoeoapp/Detail.aspx?Instid=7463&id=7463&option=licence&searchrange=licence&range=POEO> **144 Otho Street, Inverell**  
**licence&prp=no&status=Issued** **Monitoring Frequency - Quarterly**

**Date Sampled** 2 and 3 December 2019  
**Date Reported** 15-Jan-20  
**Date Published** 17-Jan-20

**Sampling Notes:**

The laboratory and field analysis results indicate that landfill leachate does not appear to be impacting groundwater at the monitoring locations.

All groundwater monitoring bores were sampled, however the leachate dam was dry this round, so no sample was collected.

Groundwater from the up gradient monitoring well BH1 exceeded the established threshold levels for nitrate (at 82 mg/L) and the L/N ratio (29.28).

The continuing elevated nitrate and sulphate levels detected in monitoring well BH1 is not associated with any other landfill leachate indicators. Bores down gradient of the landfill did not have these characteristics. As this monitoring well is situated up gradient of the landfill, the elevated level of nitrate could be representative of an outside regional/local influence such as agriculture.

Sampling point	BH1	BH2a	BH2b	BH3a	BH3b	BH4	BH5	BD1 (BH1)
EPA Identification Numbers	6	7	8	9	10	11	12	-
pH (field)	6.7	-	6.8	6.8	6.7	7.1	7.8	-
Conductivity	-	-	3,391	2,014	1,466	3005	449.8	-
Static Water Level	606.54	-	579.62	590.11	584.46	591.98	604.01	-
pH (lab)	7	-	7.1	7	7	7.5	7.1	7.1
TDS	920	-	1940	1130	855	1220	290	910
BOD	<2	-	<2	<2	<2	<2	<2	<2
TOC	3	-	12	5	14	16	8	3
Total Phenols	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Iron	0.16	-	0.17	0.05	0.02	0.32	0.02	0.14
Manganese	<0.01	-	0.02	0.1	0.28	0.15	0.01	<0.01
Sodium	41	-	365	130	110	275	52	41
Calcium	125	-	77	105	110	82	40	130
Potassium	1.7	-	1.8	1	3.2	6.5	1.6	1.8
Magnesium	120	-	255	155	76	78	16	120
Ammonia	<0.1	-	<0.1	<0.1	<0.1	0.3	<0.1	<0.1
Chloride	27	-	320	140	23	495	7	27
Fluoride	0.17	-	0.16	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate	79	-	0.22	<0.1	<0.1	<0.1	5	77
Sulfate as SO4	19	-	10	6	8	37	22	20
Bicarbonate	955	-	1840	1180	990	460	295	960
Phosphate	<0.1	-	0.18	<0.1	<0.1	0.15	0.12	<0.1
Nitrite	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Alkalinity	785	-	1510	965	810	375	240	785
TKN	-	-	-	-	-	-	-	-

**Table notes:**

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