

Quarterly Groundwater Results

November 2024



City of Newcastle - Summerhill Waste Management Centre

141 Minmi Road, Wallsend, NSW

Environment Protection Licence 5897 - Condition M2 – Groundwater Sampling

Parameter	CN ID		GW33*	GW34	GW35*	GW42*	GW46	GW48	GW49*	GW51
	EPL ID		33	34	35	42	46	48	49	51
	Units	LOR								
Ammonia	mg/L	0.01	1.31	1.59	2.74	-	0.64	0.04	-	1.10
Calcium	mg/L	1	400	204	336	-	62	65	-	11
Chloride	mg/L	1	1,810	3,480	4,050	-	2,900	99	-	229
Electrical Conductivity	µS/cm	1	10,700	10,800	13,200	-	9,730	1,300	-	1,680
Iron	mg/L	0.05	40.7	3.61	0.19	-	2.96	0.31	-	0.72
Lead	mg/L	0.001	<0.001	<0.001	0.002	-	<0.001	<0.001	-	<0.001
Magnesium	mg/L	1	568	191	211	-	149	42	-	26
Nitrate as N	mg/L	0.01	0.11	0.03	1.06	-	0.03	<0.01	-	<0.01
pH Value	pH Unit	0.01	6.06	6.30	6.52	-	6.70	6.26	-	6.05
Potassium	mg/L	1	38	22	16	-	31	6	-	12
Sodium	mg/L	1	1,330	2,000	2,510	-	1,760	190	-	347
Sulfate	mg/L	1	3,450	463	296	-	534	148	-	382
Total Alkalinity as CaCO ₃	mg/L	1	62	625	868	-	334	408	-	288
Total Dissolved Solids	mg/L	10	8,560	6,180	7,970	-	5,660	874	-	1,330
Total Organic Carbon	mg/L	1	5	58	8	-	6	4	-	6
Standing Water Level	mAHD	0.01	24.29	26.2	6.60	-	22.12	36.56	-	35.58

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Parameter	CN ID		GW101*	GW102	GW103	GW104	GW105	GW106*	GW107*
	EPL ID		68	69	70	71	72	73	74
	Units	LOR							
Ammonia	mg/L	0.01	-	0.46	2.07	1.30	1.18	-	-
Calcium	mg/L	1	-	11	254	43	101	-	-
Chloride	mg/L	1	-	231	2510	2680	4310	-	-
Electrical Conductivity	µS/cm	1	-	1680	8920	8760	12600	-	-
Iron	mg/L	0.05	-	2.83	6.15	19.5	30.9	-	-
Lead	mg/L	0.001	-	0.003	0.005	0.008	<0.001	-	-
Magnesium	mg/L	1	-	22	153	179	326	-	-
Nitrate as N	mg/L	0.01	-	<0.01	<0.01	<0.01	0.11	-	-
pH Value	pH Unit	0.01	-	5.70	5.87	5.54	6.62	-	-
Potassium	mg/L	1	-	9	24	34	42	-	-
Sodium	mg/L	1	-	343	1590	1570	2200	-	-
Sulfate	mg/L	1	-	298	477	384	405	-	-
Total Alkalinity as CaCO ₃	mg/L	1	-	285	646	230	309	-	-
Total Dissolved Solids	mg/L	10	-	1050	5350	5230	8500	-	-
Total Organic Carbon	mg/L	1	-	83	19	7	18	-	-
Standing Water Level	mBTOC	0.01	-	16.45	8.735	10.19	6.07	-	-

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Parameter	CN ID		GW109	GW110	GW111*	GW112*	GW113*	GW114	GW115	GW116
	EPL ID		75	76	77	78	79	80	81	82
	Units	LOR								
Ammonia	mg/L	0.01	0.17	0.49	-	-	-	0.52	-	-
Calcium	mg/L	1	32	9	-	-	-	77	-	-
Chloride	mg/L	1	517	159	-	-	-	371	-	-
Electrical Conductivity	µS/cm	1	1750	1410	-	-	-	2200	-	-
Iron	mg/L	0.05	9.78	5.19	-	-	-	7.60	-	-
Lead	mg/L	0.001	0.004	0.010	-	-	-	<0.001	-	-
Magnesium	mg/L	1	29	13	-	-	-	54	-	-
Nitrate as N	mg/L	0.01	0.03	<0.10	-	-	-	<0.01	-	-
pH Value	pH Unit	0.01	6.35	5.53	-	-	-	6.76	-	-
Potassium	mg/L	1	8	10	-	-	-	11	-	-
Sodium	mg/L	1	309	288	-	-	-	353	-	-
Sulfate	mg/L	1	63	230	-	-	-	77	-	-
Total Alkalinity as CaCO ₃	mg/L	1	101	158	-	-	-	544	-	-
Total Dissolved Solids	mg/L	10	1000	1050	-	-	-	11270	-	-
Total Organic Carbon	mg/L	1	11	92	-	-	-	11	-	-
Standing Water Level	mBTOC	0.01	5.83	12.87	-	-	-	70.85	-	-

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Parameter	CN ID		GW117	GW118*	GW119*	GW120
	EPL ID		83	84	85	86
	Units	LOR				
Ammonia	mg/L	0.01	-	-	-	0.04
Calcium	mg/L	1	-	-	-	62
Chloride	mg/L	1	-	-	-	45
Electrical Conductivity	µS/cm	1	-	-	-	1170
Iron	mg/L	0.05	-	-	-	1.08
Lead	mg/L	0.001	-	-	-	0.004
Magnesium	mg/L	1	-	-	-	37
Nitrate as N	mg/L	0.01	-	-	-	0.04
pH Value	pH Unit	0.01	-	-	-	6.14
Potassium	mg/L	1	-	-	-	11
Sodium	mg/L	1	-	-	-	170
Sulfate	mg/L	1	-	-	-	228
Total Alkalinity as CaCO ₃	mg/L	1	-	-	-	340
Total Dissolved Solids	mg/L	10	-	-	-	776
Total Organic Carbon	mg/L	1	-	-	-	10
Standing Water Level	mBTOC	0.01	-	-	-	10.265

Notes:

CN = City of Newcastle

EPL = Environment Protection Licence

LOR = limit of reporting

mAHD = metres above Australian Height Datum

Results preceded by < indicate that the results were below the limit of detection for that analysis

NR = no result (non-compliant sample, insufficient water to sample etc)

EPL Monitoring points 42 was not sampled as wells are damaged (-)

*Insufficient water for analysis to be conducted

Date sampled: 18, 19, 20 and 21 November 2024

Final data obtained: 6 December 2024

Date published: 17 December 2024

A copy of the Environmental Protection Licence can be viewed at: <http://app.epa.nsw.gov.au/prpoeoapp/> A map showing the location of monitoring points can be viewed at: <http://www.newcastle.nsw.gov.au/Living/Waste-recycling/Summerhill-Waste-management-Centre/Environmental-Monitoring-Data>