

Quarterly Groundwater Results

February 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	0.86	0.64	-	-	0.71	0.09	-	0.26
Calcium	mg/L	1	401	133	-	-	68	60	-	9
Chloride	mg/L	1	1960	2770	-	-	2930	128	-	171
Electrical Conductivity	µS/cm	1	10600	9820	-	-	9850	1390	-	1570
Iron	mg/L	0.05	42.5	2.88	-	-	3.72	5.09	-	7.43
Lead	mg/L	0.001	0.007	0.004	-	-	<0.001	0.006	-	0.040
Magnesium	mg/L	1	606	176	-	-	168	38	-	22
Nitrate as N	mg/L	0.01	0.20	0.11	-	-	<0.01	0.02	-	0.22
pH Value	pH Unit	0.01	5.97	5.65	-	-	6.53	6.76	-	5.60
Potassium	mg/L	1	45	23	-	-	34	7	-	9
Sodium	mg/L	1	1460	1460	-	-	1940	230	-	317
Sulfate	mg/L	1	3120	483	-	-	605	126	-	278
Total Alkalinity as CaCO ₃	mg/L	1	47	466	-	-	397	495	-	294
Total Dissolved Solids	mg/L	10	9290	6170	-	-	6120	918	-	1450
Total Organic Carbon	mg/L	1	6	12	-	-	4	4	-	<1
Standing Water Level	mAHD	0.01	24.29	26.32	-	-	21.89	35.79	-	35.57

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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	-	0.04	1.42	0.79	1.00	-	-
Calcium	mg/L	1	-	8	263	39	93	-	-
Chloride	mg/L	1	-	212	3020	2880	3890	-	-
Electrical Conductivity	µS/cm	1	-	1580	8630	9240	12100	-	-
Iron	mg/L	0.05	-	2.51	5.76	17.3	28.3	-	-
Lead	mg/L	0.001	-	0.003	0.003	0.018	0.001	-	-
Magnesium	mg/L	1	-	18	110	184	283	-	-
Nitrate as N	mg/L	0.01	-	0.11	<0.01	0.09	<0.01	-	-
pH Value	pH Unit	0.01	-	5.73	5.95	5.42	6.51	-	-
Potassium	mg/L	1	-	8	28	34	36	-	-
Sodium	mg/L	1	-	315	1540	1370	1900	-	-
Sulfate	mg/L	1	-	282	306	418	439	-	-
Total Alkalinity as CaCO ₃	mg/L	1	-	278	693	211	291	-	-
Total Dissolved Solids	mg/L	10	-	1020	5510	5710	7660	-	-
Total Organic Carbon	mg/L	1	-	<1	36	<1	17	-	-
Standing Water Level	mBTOC	0.01	-	17.19	9.11	14.895	6.99	-	-

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February 2024

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	0.57	0.19	-	-	-	0.36	0.05	-
Calcium	mg/L	1	119	21	-	-	-	62	49	-
Chloride	mg/L	1	2910	75	-	-	-	376	534	-
Electrical Conductivity	µS/cm	1	9450	1620	-	-	-	2190	2620	-
Iron	mg/L	0.05	20.4	14.4	-	-	-	5.84	15.8	-
Lead	mg/L	0.001	0.003	0.033	-	-	-	0.002	0.021	-
Magnesium	mg/L	1	262	32	-	-	-	46	55	-
Nitrate as N	mg/L	0.01	<0.01	<0.01	-	-	-	0.02	0.02	-
pH Value	pH Unit	0.01	6.15	5.97	-	-	-	6.71	6.52	-
Potassium	mg/L	1	26	13	-	-	-	11	6	-
Sodium	mg/L	1	1590	319	-	-	-	374	383	-
Sulfate	mg/L	1	568	376	-	-	-	19	248	-
Total Alkalinity as CaCO ₃	mg/L	1	155	458	-	-	-	629	365	-
Total Dissolved Solids	mg/L	10	6010	1110	-	-	-	1440	1700	-
Total Organic Carbon	mg/L	1	6	<1	-	-	-	9	3	-
Standing Water Level	mBTOC	0.01	6.170	13.66	-	-	-	70.76	48.240	-

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Parameter	CN ID		GW117*	GW118*	GW119*	GW120
	EPL ID		83	84	85	86
	Units	LOR				
Ammonia	mg/L	0.01	-	-	-	0.03
Calcium	mg/L	1	-	-	-	60
Chloride	mg/L	1	-	-	-	63
Electrical Conductivity	µS/cm	1	-	-	-	1310
Iron	mg/L	0.05	-	-	-	3.07
Lead	mg/L	0.001	-	-	-	0.013
Magnesium	mg/L	1	-	-	-	36
Nitrate as N	mg/L	0.01	-	-	-	0.23
pH Value	pH Unit	0.01	-	-	-	5.79
Potassium	mg/L	1	-	-	-	12
Sodium	mg/L	1	-	-	-	206
Sulfate	mg/L	1	-	-	-	213
Total Alkalinity as CaCO ₃	mg/L	1	-	-	-	415
Total Dissolved Solids	mg/L	10	-	-	-	946
Total Organic Carbon	mg/L	1	-	-	-	<1
Standing Water Level	mBTOC	0.01	-	-	-	10.77

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: 13, 14, 15 2024

Final data obtained: 22 February 2024

Date published: 25 March 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>