

# Quarterly Groundwater Results

## February 2025



### 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	0.73	1.26	-	-	0.83	0.04	-	0.11
Calcium	mg/L	1	420	178	-	-	64	73	-	9
Chloride	mg/L	1	2330	3080	-	-	3090	102	-	208
Electrical Conductivity	µS/cm	1	10900	9930	-	-	9740	1310	-	1640
Iron	mg/L	0.05	66.7	7.34	-	-	4.36	1.38	-	4.20
Lead	mg/L	0.001	0.002	0.004	-	-	0.003	0.003	-	0.020
Magnesium	mg/L	1	604	175	-	-	157	41	-	22
Nitrate as N	mg/L	0.01	<0.10	0.09	-	-	0.01	<0.01	-	<0.01
pH Value	pH Unit	0.01	6.03	5.97	-	-	6.65	6.10	-	6.32
Potassium	mg/L	1	39	22	-	-	33	7	-	11
Sodium	mg/L	1	1380	1830	-	-	1790	191	-	312
Sulfate	mg/L	1	3360	404	-	-	502	123	-	286
Total Alkalinity as CaCO <sub>3</sub>	mg/L	1	73	594	-	-	391	463	-	291
Total Dissolved Solids	mg/L	10	10900	7300	-	-	6380	854	-	1280
Total Organic Carbon	mg/L	1	4	10	-	-	6	4	-	7
Standing Water Level	mAHD	0.01	24.30	26.22	6.48	-	22.16	36.355	37.06	35.58

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Parameter	CN ID		GW101*	GW102	GW103	GW104	GW105	GW106*	GW107*
	EPL ID	LOR	68	69	70	71	72	73	74
Ammonia	mg/L	0.01	-	0.05	1.45	1.30	0.74	-	-
Calcium	mg/L	1	-	10	2.95	46	125	-	-
Chloride	mg/L	1	-	195	2470	2950	4550	-	-
Electrical Conductivity	µS/cm	1	-	1660	9130	8920	13500	-	-
Iron	mg/L	0.05	-	3.50	12.5	19.6	33.2	-	-
Lead	mg/L	0.001	-	0.006	0.015	0.014	<0.0001	-	-
Magnesium	mg/L	1	-	20	160	174	341	-	-
Nitrate as N	mg/L	0.01	-	0.01	<0.01	<0.01	<0.01	-	-
pH Value	pH Unit	0.01	-	5.66	5.87	5.46	6.42	-	-
Potassium	mg/L	1	-	8	25	33	40	-	-
Sodium	mg/L	1	-	319	1620	1530	2370	-	-
Sulfate	mg/L	1	-	290	480	409	494	-	-
Total Alkalinity as CaCO <sub>3</sub>	mg/L	1	-	288	814	234	250	-	-
Total Dissolved Solids	mg/L	10	-	1050	6830	6180	10800	-	-
Total Organic Carbon	mg/L	1	-	10	21	7	17	-	-
Standing Water Level	mBTOC	0.01	-	16.62	8.715	13.02	5.675	17.05	25.77

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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	0.28	0.24	-	-	-	0.62	0.04	-
Calcium	mg/L	1	44	18	-	-	-	70	42	-
Chloride	mg/L	1	980	87	-	-	-	413	409	-
Electrical Conductivity	µS/cm	1	4160	1490	-	-	-	2250	2260	-
Iron	mg/L	0.05	15.0	5.95	-	-	-	8.80	4.26	-
Lead	mg/L	0.001	<0.001	0.008	-	-	-	0.007	0.003	-
Magnesium	mg/L	1	70	18	-	-	-	49	45	-
Nitrate as N	mg/L	0.01	<0.01	<0.01	-	-	-	<0.01	<0.01	-
pH Value	pH Unit	0.01	6.32	6.25	-	-	-	6.83	6.47	-
Potassium	mg/L	1	12	9	-	-	-	12	8	-
Sodium	mg/L	1	622	252	-	-	-	351	413	-
Sulfate	mg/L	1	149	310	-	-	-	27	251	-
Total Alkalinity as CaCO <sub>3</sub>	mg/L	1	89	343	-	-	-	621	324	-
Total Dissolved Solids	mg/L	10	2390	1010	-	-	-	1450	1540	-
Total Organic Carbon	mg/L	1	11	21	-	-	-	6	6	-
Standing Water Level	mBTOC	0.01	5.83	12.835	47.81	74.68	-	70.27	48.26	-

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Parameter	CN ID		GW117	GW118*	GW119*	GW120
	EPL ID		83	84	85	86
	Units	LOR				
Ammonia	mg/L	0.01	0.19	-	-	0.03
Calcium	mg/L	1	14	-	-	41
Chloride	mg/L	1	327	-	-	421
Electrical Conductivity	µS/cm	1	1720	-	-	1070
Iron	mg/L	0.05	33.1	-	-	0.75
Lead	mg/L	0.001	0.018	-	-	0.003
Magnesium	mg/L	1	28	-	-	23
Nitrate as N	mg/L	0.01	0.03	-	-	0.02
pH Value	pH Unit	0.01	6.31	-	-	6.58
Potassium	mg/L	1	9	-	-	8
Sodium	mg/L	1	309	-	-	128
Sulfate	mg/L	1	236	-	-	158
Total Alkalinity as CaCO <sub>3</sub>	mg/L	1	218	-	-	350
Total Dissolved Solids	mg/L	10	1060	-	-	710
Total Organic Carbon	mg/L	1	9	-	-	13
Standing Water Level	mBTOC	0.01	49.79	-	41.96	10.09

**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

- = 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: 24, 25, 26, 27 and 28 February 2025

Final data obtained: 7 February 2025

Date published: 17 March 2025

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>