Surface Water Results
May 2023

City of Newcastle - Summerhill Waste Management Centre

141 Minmi Road, Wallsend, NSW

Environment Protection License 5897 - Condition M2 – Special Frequency 1 (Daily during discharge)
Monthly rainfall = 233.2mm

Purpose of Sampling		SW55, SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59
CN ID	**EPL ID**	1/05/2024	2/05/2024	3/05/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	7.35	7.63	7.14
SW56	**56**	7.49	7.35	7.15
SW57	**57**	7.23	7.23	7.00
SW58a	**61**	7.30	7.27	7.21
SW59	**66**	7.35	7.38	7.03
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	384	388	441
SW56	**56**	460	422	473
SW57	**57**	179	240	276
SW58a	**61**	414	421	463
SW59	**66**	473	426	404
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	138	142	89
SW56	**56**	885	1000	858
SW57	**57**	73	61	66
SW58a	**61**	494	560	523
SW59	**66**	583	379	1570
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	0.12	0.05	0.08
SW56	**56**	1.97	1.44	2.04
SW57	**57**	0.025	0.025	0.025
SW58a	**61**	0.79	0.71	0.61
SW59	**66**	0.025	0.025	0.025
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	9	4	4
SW56	**56**	10	7	9
SW57	**57**	5	2	3
SW58a	**61**	7	5	5
SW59	**66**	5	2	3

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Purpose of Sampling		SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59
CN ID		4/05/2024	5/05/2024	6/05/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	7.60	7.44
SW56	**56**	6.94	7.05	7.41
SW57	**57**	6.92	7.11	7.21
SW58a	**61**	7.20	7.20	7.21
SW59	**66**	7.12	7.12	7.27
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	228	322
SW56	**56**	460	501	428
SW57	**57**	294	290	207
SW58a	**61**	475	464	333
SW59	**66**	474	323	342
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	71	168
SW56	**56**	840	754	959
SW57	**57**	58	54	100
SW58a	**61**	697	519	500
SW59	**66**	716	1690	689
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	0.06	0.39
SW56	**56**	1.47	2.23	2.70
SW57	**57**	0.10	0.06	0.060
SW58a	**61**	1.26	1.37	1.12
SW59	**66**	0.025	0.025	0.025
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	4	4
SW56	**56**	5	8	13
SW57	**57**	4	3	2
SW58a	**61**	6	6	6
SW59	**66**	2	3	10

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Purpose of Sampling		SW55, SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59
CN ID		7/05/2024	8/05/2024	9/05/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	7.20	7.25	7.22
SW56	**56**	7.22	7.23	7.24
SW57	**57**	7.07	7.06	7.06
SW58a	**61**	7.03	7.31	7.28
SW59	**66**	7.28	7.41	7.16
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	366	382	418
SW56	**56**	422	418	436
SW57	**57**	248	261	297
SW58a	**61**	422	407	439
SW59	**66**	370	493	374
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	162	117	75
SW56	**56**	772	900	834
SW57	**57**	122	99	106
SW58a	**61**	429	614	325
SW59	**66**	331	283	666
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	0.41	0.48	0.60
SW56	**56**	2.38	2.16	2.10
SW57	**57**	0.120	0.160	0.23
SW58a	**61**	0.6	1.2	0.74
SW59	**66**	0.025	0.025	0.025
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	4	2	3
SW56	**56**	14	10	11
SW57	**57**	<2	2	<2
SW58a	**61**	4	5	3
SW59	**66**	<2	<2	<2

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Purpose of Sampling		SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59
CN ID		10/05/2024	11/05/2024	12/05/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	7.29	7.24
SW56	**56**	7.43	7.46	7.29
SW57	**57**	7.21	7.32	7.20
SW58a	**61**	7.38	7.36	7.39
SW59	**66**	7.26	7.22	7.28
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	550	544
SW56	**56**	480	554	641
SW57	**57**	329	297	345
SW58a	**61**	464	522	551
SW59	**66**	564	491	489
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	167	105
SW56	**56**	735	720	604
SW57	**57**	101	78	62
SW58a	**61**	274	436	336
SW59	**66**	506	1030	517
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	0.73	0.65
SW56	**56**	2.54	3.76	6.72
SW57	**57**	0.34	0.025	0.12
SW58a	**61**	0.8	2.66	2.78
SW59	**66**	0.06	0.09	0.025
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	4	2
SW56	**56**	13	9	14
SW57	**57**	5	2	<2
SW58a	**61**	5	5	4
SW59	**66**	4	<2	<2

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Purpose of Sampling		SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59	SW56, SW57, SW58A & SW59
CN ID		13/05/2024	14/05/2024	15/05/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	7.32	N/A
SW56	**56**	7.32	7.23	7.34
SW57	**57**	7.14	7.10	7.18
SW58a	**61**	7.25	7.45	7.26
SW59	**66**	7.27	7.30	7.28
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	681	N/A
SW56	**56**	583	574	599
SW57	**57**	393	446	485
SW58a	**61**	605	600	665
SW59	**66**	509	586	570
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	124	N/A
SW56	**56**	586	636	483
SW57	**57**	68	37	52
SW58a	**61**	244	66	170
SW59	**66**	381	384	513
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	1.24	N/A
SW56	**56**	4.66	4.80	6.13
SW57	**57**	0.18	0.33	0.39
SW58a	**61**	2.49	1.52	2.62
SW59	**66**	0.025	0.07	0.10
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	5	N/A
SW56	**56**	9	16	14
SW57	**57**	3	2	2
SW58a	**61**	3	6	7
SW59	**66**	2	2	2

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Purpose of Sampling		SW56, SW57, SW58A & SW59	SW57, SW58A & SW59	SW57, SW58A & SW59
CN ID	**EPL ID**	16/05/2024	17/05/2024	18/05/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	7.38	N/A	N/A
SW57	**57**	7.20	7.35	7.16
SW58a	**61**	7.24	7.28	7.20
SW59	**66**	7.34	7.34	7.29
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	583	N/A	N/A
SW57	**57**	536	524	515
SW58a	**61**	710	735	750
SW59	**66**	614	638	658
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	**525**	N/A	N/A
SW57	**57**	50	24	30
SW58a	**61**	214	244	312
SW59	**66**	496	480	502
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	5.36	N/A	N/A
SW57	**57**	0.43	0.27	0.20
SW58a	**61**	1.59	0.55	0.23
SW59	**66**	0.10	0.025	0.09
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	11	N/A	N/A
SW57	**57**	2	<2	5
SW58a	**61**	6	4	8
SW59	**66**	<2	3	7

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Purpose of Sampling		SW57, SW58A & SW59	SW56, SW57, SW58A & SW59	SW56, SW57, SW58A & SW59
CN ID	**EPL ID**	19/05/2024	20/05/2024	21/05/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	7.59	7.45
SW57	**57**	7.07	7.09	7.30
SW58a	**61**	7.17	7.19	7.42
SW59	**66**	7.26	7.30	7.47
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	580	579
SW57	**57**	513	512	503
SW58a	**61**	685	754	568
SW59	**66**	681	707	703
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	192	182
SW57	**57**	29	21	27
SW58a	**61**	217	112	89
SW59	**66**	446	546	187
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	5.2	5.4
SW57	**57**	0.19	0.21	0.18
SW58a	**61**	0.13	0.10	0.10
SW59	**66**	0.15	0.13	0.11
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	11	8
SW57	**57**	5	5	4
SW58a	**61**	7	6	4
SW59	**66**	4	6	5

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Purpose of Sampling		SW57, SW58A & SW59	SW57, SW58A & SW59	SW57, SW58A & SW59
CN ID	**EPL ID**	22/05/2024	23/05/2024	24/05/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	7.91	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	7.40	7.29	7.30
SW58a	**61**	7.44	7.34	7.36
SW59	**66**	7.55	7.45	7.44
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	924	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	491	495	514
SW58a	**61**	663	686	759
SW59	**66**	694	715	764
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	46	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	13	11	9
SW58a	**61**	188	163	190
SW59	**66**	404	457	134
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	1.11	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	0.14	0.16	0.15
SW58a	**61**	0.09	0.025	0.13
SW59	**66**	0.11	0.12	0.09
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	6	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	4	3	5
SW58a	**61**	<2	2	6
SW59	**66**	4	<2	6

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Purpose of Sampling		SW57, SW58A & SW59	SW57, SW58A & SW59	SW57
CN ID	**EPL ID**	25/05/2024	26/05/2024	27/05/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	7.42	7.50	7.40
SW58a	**61**	7.26	7.42	N/A
SW59	**66**	7.36	7.60	N/A
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	511	510	513
SW58a	**61**	813	823	N/A
SW59	**66**	784	809	N/A
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	11	77	22
SW58a	**61**	226	264	N/A
SW59	**66**	323	332	N/A
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	0.025	0.07	0.14
SW58a	**61**	0.025	0.025	N/A
SW59	**66**	0.025	0.025	N/A
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	2	4	2
SW58a	**61**	3	4	N/A
SW59	**66**	3	5	N/A

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Purpose of Sampling		SW57& SW58A	SW57 & SW58A	SW57 & SW58A
CN ID	**EPL ID**	28/05/2024	29/05/2024	30/05/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	7.30	7.55	7.26
SW58a	**61**	7.24	7.33	7.11
SW59	**66**	N/A	N/A	N/A
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	513	513	512
SW58a	**61**	870	889	898
SW59	**66**	N/A	N/A	N/A
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	6	9	10
SW58a	**61**	85	227	187
SW59	**66**	N/A	N/A	N/A
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	0.06	0.27	0.025
SW58a	**61**	0.025	0.09	0.15
SW59	**66**	N/A	N/A	N/A
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	<2	<2	<2
SW58a	**61**	3	2	3
SW59	**66**	N/A	N/A	N/A

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Purpose of Sampling		SW57, SW58A & SW59		
CN ID	**EPL ID**	31/05/2024		
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A		
SW56	**56**	N/A		
SW57	**57**	7.51		
SW58a	**61**	7.18		
SW59	**66**	7.70		
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A		
SW56	**56**	N/A		
SW57	**57**	512		
SW58a	**61**	910		
SW59	**66**	913		
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A		
SW56	**56**	N/A		
SW57	**57**	12		
SW58a	**61**	132		
SW59	**66**	256		
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A		
SW56	**56**	N/A		
SW57	**57**	0.08		
SW58a	**61**	0.19		
SW59	**66**	0.24		
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A		
SW56	**56**	N/A		
SW57	**57**	6		
SW58a	**61**	2		
SW59	**66**	6		

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Environment Protection Licence 5897 - Condition M2 – SF1 and SF2 Sampling

	CN ID		SW56	SW57	SW58a	SW59
	EPL ID		56	57	61	66
DATE			22/05/24	31/05/24	22/05/24	31/05/24
Parameter	Units	LOR				
Alkalinity (as calcium carbonate)	mg/L	1	139	97	88	125
Aluminium	mg/L	0.01	11.6	0.24	9.58	3.23
Ammonia	mg/L	0.05	5.75	0.08	0.09	0.24
Copper	mg/L	0.001	0.017	<0.001	0.010	0.008
Biological Oxygen Demand	mg/L	2	8	6	<2	6
Electrical Conductivity	uS/cm	10	573	512	663	913
Iron	mg/L	0.05	10.0	0.64	7.95	4.83
Lead	mg/L	0.001	0.020	<0.001	0.009	0.008
Nitrate as N	mg/L	0.05	<0.05	0.09	0.31	0.07
Organochlorine Pesticides	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Organophosphate Pesticides	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.005
pH	pH Units	0.01	7.42	7.51	7.44	7.70
Total Suspended Solids	mg/L	5	320	12	188	256
Zinc	mg/L	0.005	0.068	0.009	0.041	0.043

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Environment Protection Licence 5897 - Condition M2 – SF1, SF2 and SF3 Sampling

	CN ID		SW55	SW55	SW55	SW55	SW56
	EPL ID		55	55	55	55	56
DATE			1/05/24	5/05/24	11/05/24	22/05/24	20/05/24
Parameter	**Units**	**LOR**					
Alkalinity (as calcium carbonate)	mg/L	1	81	66	161	242	138
Aluminium	mg/L	0.01	0.66	2.16	5.23	0.01	7.40
Ammonia	mg/L	0.05	0.12	0.06	0.73	1.11	5.20
Arsenic	mg/L	0.001	0.003	0.002	0.006	0.001	0.009
Barium	mg/L	0.001	0.040	0.043	0.082	0.053	0.089
Benzene	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
BOD	mg/L	2	9	4	4	6	11
Cadmium	mg/L	0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001
Calcium	mg/L	1	20	16	26	46	19
Chloride	mg/L	1	37	17	40	72	59
Chromium (Hex)	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium (Total)	mg/L	0.001	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt	mg/L	0.001	0.002	<0.001	0.004	0.002	0.008
Copper	mg/L	0.001	0.007	0.002	0.015	<0.001	0.016
Electrical Conductivity	uS/cm	10	384	228	550	924	580
Ethyl benzene	mg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Fluoride	mg/L	0.1	0.3	0.2	0.04	0.6	0.4
Iron	mg/L	0.05	0.79	1.70	5.32	0.15	8.85
Lead	mg/L	0.001	0.008	0.003	0.020	<0.001	0.020
Magnesium	mg/L	1	8	5	14	25	11
Manganese	mg/L	0.001	0.110	0.039	0.337	0.475	0.636
Mercury	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nitrate as N	mg/L	0.01	0.27	0.11	0.09	0.06	*
Organochlorine Pesticides	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Organophosphate Pesticides	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
pH	pH Units	0.01	7.35	7.60	7.29	7.91	7.59
Polycyclic Aromatic Hydrocarbons	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0004
Potassium	mg/L	1	15	6	16	17	9
Sodium	mg/L	1	38	18	66	111	68
Sulfate	mg/L	1	41	24	65	121	*

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	CN ID		SW55	SW55	SW55	SW55	SW56
	EPL ID		55	55	55	55	56
DATE			1/05/24	5/05/24	11/05/24	22/05/24	20/05/24
Parameter	**Units**	**LOR**					
Total Suspended Solids	mg/L	5	138	71	167	46	192
Toluene	mg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Dissolved Solids	mg/L	10	296	200	415	590	569
Total Organic Carbon	mg/L	1	17	13	20	18	19
Total Petroleum Hydrocarbons	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Phenolics	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Zinc	mg/L	0.005	0.055	0.039	0.123	<0.005	0.071

*Unable to be analysed due to processing error at the laboratory

Summerhill Waste Management Centre

141 Minmi Road, Wallsend, NSW

Final data obtained: 11/06/24
Date published: 20/06/24

Notes:
CN = City of Newcastle
EPL = Environment Protection Licence
NR = no result (non-compliant sample, water body dry etc)
NA = Not applicable, sample not required
1. Water body not discharging from site
2. SW58a located in Wentworth Creek and impacted by other catchment activities.

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:
https://www.newcastle.nsw.gov.au/Living/Waste-and-recycling/Summerhill-Waste-management-Centre/Environmental-Monitoring