

# Surface Water Results

## December 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 = 74.4

Purpose of Sampling		SW56, SW58a & SW59			
CN ID	EPL ID	1/12/2023	2/12/2023	3/12/2023	
<b>Parameter:</b>		<b>pH (pH unit)</b>			
SW55	55	N/A	N/A	N/A	
SW56	56	7.47	N/A	N/A	
SW57	57	N/A	N/A	N/A	
SW58a	61	7.43	N/A	N/A	
SW59	66	7.45	N/A	N/A	
<b>Parameter:</b>		<b>Electrical Conductivity (µS/cm)</b>			
SW55	55	N/A	N/A	N/A	
SW56	56	733	N/A	N/A	
SW57	57	N/A	N/A	N/A	
SW58a	61	799	N/A	N/A	
SW59	66	1140	N/A	N/A	
<b>Parameter:</b>		<b>Suspended Solids (mg/L)</b>			
SW55	55	N/A	N/A	N/A	
SW56	56	92	N/A	N/A	
SW57	57	N/A	N/A	N/A	
SW58a	61	40	N/A	N/A	
SW59	66	26	N/A	N/A	
<b>Parameter:</b>		<b>Ammonia (mg/L)</b>			
SW55	55	N/A	N/A	N/A	
SW56	56	0.22	N/A	N/A	
SW57	57	N/A	N/A	N/A	
SW58a	61	<0.05	N/A	N/A	
SW59	66	0.33	N/A	N/A	
<b>Parameter:</b>		<b>Biological Oxygen Demand (mg/L)</b>			
SW55	55	N/A	N/A	N/A	
SW56	56	6	N/A	N/A	
SW57	57	N/A	N/A	N/A	
SW58a	61	3	N/A	N/A	
SW59	66	5	N/A	N/A	

# Surface Water Results

## December 2023

Purpose of Sampling				
CN ID	EPL ID	4/12/2023	5/12/2023	6/12/2023
<b>Parameter:</b>		<b>pH (pH unit)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Electrical Conductivity (µS/cm)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Suspended Solids (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Ammonia (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Biological Oxygen Demand (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A

# Surface Water Results

## December 2023

Purpose of Sampling				
CN ID	EPL ID	7/12/2023	8/12/2023	9/12/2023
<b>Parameter:</b>		<b>pH (pH unit)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Electrical Conductivity (µS/cm)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Suspended Solids (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Ammonia (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Biological Oxygen Demand (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A

# Surface Water Results

## December 2023

Purpose of Sampling				
CN ID	EPL ID	10/12/2023	11/12/23	12/12/23
<b>Parameter:</b>		<b>pH (pH unit)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Electrical Conductivity (µS/cm)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Suspended Solids (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Ammonia (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Biological Oxygen Demand (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A

# Surface Water Results

## December 2023

Purpose of Sampling				
CN ID	EPL ID	13/12/2023	14/12/23	15/12/23
<b>Parameter:</b>		<b>pH (pH unit)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Electrical Conductivity (µS/cm)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Suspended Solids (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Ammonia (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Biological Oxygen Demand (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A

# Surface Water Results

## December 2023

Purpose of Sampling				
CN ID	EPL ID	16/12/2023	17/12/23	18/12/23
<b>Parameter:</b>		<b>pH (pH unit)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Electrical Conductivity (µS/cm)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Suspended Solids (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Ammonia (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Biological Oxygen Demand (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A

# Surface Water Results

## December 2023

Purpose of Sampling				
CN ID	EPL ID	19/12/2023	20/12/23	21/12/23
<b>Parameter:</b>		<b>pH (pH unit)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Electrical Conductivity (µS/cm)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Suspended Solids (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Ammonia (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Biological Oxygen Demand (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A

# Surface Water Results

## December 2023

Purpose of Sampling				
CN ID	EPL ID	22/12/2023	23/12/23	24/12/23
<b>Parameter:</b>		<b>pH (pH unit)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Electrical Conductivity (µS/cm)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Suspended Solids (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Ammonia (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Biological Oxygen Demand (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A



# Surface Water Results

## December 2023

Purpose of Sampling				
CN ID	EPL ID	25/12/2023	26/12/23	27/12/23
<b>Parameter:</b>		<b>pH (pH unit)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Electrical Conductivity (µS/cm)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Suspended Solids (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Ammonia (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Biological Oxygen Demand (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	N/A
SW58a	61	N/A	N/A	N/A
SW59	66	N/A	N/A	N/A

# Surface Water Results

## December 2023

Purpose of Sampling				SW57 & SW58a
CN ID	EPL ID	28/12/2023	29/12/23	30/12/23
<b>Parameter:</b>		<b>pH (pH unit)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	7.46
SW58a	61	N/A	N/A	7.19
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Electrical Conductivity (µS/cm)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	259
SW58a	61	N/A	N/A	371
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Suspended Solids (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	24
SW58a	61	N/A	N/A	16
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Ammonia (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	<0.05
SW58a	61	N/A	N/A	<0.05
SW59	66	N/A	N/A	N/A
<b>Parameter:</b>		<b>Biological Oxygen Demand (mg/L)</b>		
SW55	55	N/A	N/A	N/A
SW56	56	N/A	N/A	N/A
SW57	57	N/A	N/A	4
SW58a	61	N/A	N/A	2
SW59	66	N/A	N/A	N/A

# Surface Water Results

## December 2023

Purpose of Sampling		SW57 & SW58a			
CN ID	EPL ID	31/12/2023		-	-
<b>Parameter:</b>			<b>pH (pH unit)</b>		
SW55	55	N/A		-	-
SW56	56	N/A		-	-
SW57	57	7.49		-	-
SW58a	61	7.16		-	-
SW59	66	N/A		-	-
<b>Parameter:</b>			<b>Electrical Conductivity (µS/cm)</b>		
SW55	55	N/A		-	-
SW56	56	N/A		-	-
SW57	57	272		-	-
SW58a	61	396		-	-
SW59	66	N/A		-	-
<b>Parameter:</b>			<b>Suspended Solids (mg/L)</b>		
SW55	55	N/A		-	-
SW56	56	N/A		-	-
SW57	57	24		-	-
SW58a	61	16		-	-
SW59	66	N/A		-	-
<b>Parameter:</b>			<b>Ammonia (mg/L)</b>		
SW55	55	N/A		-	-
SW56	56	N/A		-	-
SW57	57	<0.05		-	-
SW58a	61	0.09		-	-
SW59	66	N/A		-	-
<b>Parameter:</b>			<b>Biological Oxygen Demand (mg/L)</b>		
SW55	55	N/A		-	-
SW56	56	N/A		-	-
SW57	57	6		-	-
SW58a	61	<2		-	-
SW59	66	N/A		-	-

# Surface Water Results

## December 2023

Environment Protection Licence 5897 - Condition M2 – Special Frequency (SF)  
1 and 2 Sampling

	CN ID		SW55	SW56	SW57	SW59
	EPL ID		55	56	57	59
DATE			29/12/23	29/12/23	29/12/23	29/12/23
Parameter	Units	LOR				
Alkalinity (as calcium carbonate)	mg/L	1	183	104	93	173
Aluminium	mg/L	0.01	0.01	0.04	0.02	0.03
Ammonia	mg/L	0.05	0.31	<0.05	<0.05	<0.05
Copper	mg/L	0.001	<0.001	0.002	<0.001	0.001
Biological Oxygen Demand	mg/L	2	6	3	5	16
Electrical Conductivity	uS/cm	10	618	910	307	1190
Iron	mg/L	0.05	<0.05	<0.05	0.76	<0.05
Lead	mg/L	0.001	<0.001	<0.001	<0.001	<0.001
Nitrate as N	mg/L	0.05	<0.05	<0.05	<0.05	0.08
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	<0.0005
pH	pH Units	0.01	7.99	8.66	7.44	8.78
Total Suspended Solids	mg/L	5	31	73	355	190
Zinc	mg/L	0.005	<0.005	0.008	<0.005	<0.005

# Surface Water Results

## December 2023

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

	CN ID		SW57	SW58a
	EPL ID		57	58
DATE			30/12/23	30/12/23
Parameter	Units	LOR		
Alkalinity (as calcium carbonate)	mg/L	1	79	60
Aluminium	mg/L	0.01	0.03	0.02
Ammonia	mg/L	0.05	<0.05	<0.05
Arsenic	mg/L	0.001	0.002	0.002
Barium	mg/L	0.001	0.017	0.028
Benzene	mg/L	0.001	<0.001	<0.001
BOD	mg/L	2	4	2
Cadmium	mg/L	0.0001	<0.0001	<0.0001
Calcium	mg/L	1	7	13
Chloride	mg/L	1	29	54
Chromium (Hex)	mg/L	0.01	<0.01	<0.01
Chromium (Total)	mg/L	0.001	<0.01	<0.01
Cobalt	mg/L	0.001	<0.001	<0.001
Copper	mg/L	0.001	<0.001	0.003
Electrical Conductivity	uS/cm	10	259	371
Ethyl benzene	mg/L	0.002	<2	<2
Fluoride	mg/L	0.1	0.3	0.3
Iron	mg/L	0.05	0.25	0.20
Lead	mg/L	0.001	<0.001	<0.001
Magnesium	mg/L	1	4	7
Manganese	mg/L	0.001	0.085	0.047
Mercury	mg/L	0.0001	<0.0001	<0.0001
Nitrate as N	mg/L	0.01	<0.05	0.26
Organochlorine Pesticides	mg/L	0.0005	<0.0005	<0.0005
Organophosphate Pesticides	mg/L	0.0005	<0.0005	<0.0005
pH	pH Units	0.01	7.46	7.19
Polycyclic Aromatic Hydrocarbons	mg/L	0.0005	<0.0005	<0.0005
Potassium	mg/L	1	8	7
Sodium	mg/L	1	37	47
Sulfate	mg/L	1	8	34
Total Suspended Solids	mg/L	5	24	16

# Surface Water Results December 2023

	CN ID		SW57	SW58a
	EPL ID		57	58
DATE			30/12/23	30/12/23
Parameter	Units	LOR		
Toluene	mg/L	0.002	<0.0002	<0.0002
Total Dissolved Solids	mg/L	10	167	271
Total Organic Carbon	mg/L	1	14	14
Total Petroleum Hydrocarbons	mg/L	0.05	<0.05	<0.05
Total Phenolics	mg/L	0.05	<0.05	<0.05
Zinc	mg/L	0.005	<0.005	<0.005

## Summerhill Waste Management Centre

141 Minmi Road, Wallsend, NSW

Final data obtained: 09/01/2024

Date published: 16/01/2024

### 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>