



## CLARENCE TOWN WASTEWATER TREATMENT WORKS - ANNUAL MONITORING SUMMARY

Environment Protection Licence No. 13250  
Date Obtained: 4 February 2014  
Date Published: 10 February 2014

Licensee Hunter Water Corporation  
36 Honeysuckle Drive  
NEWCASTLE WEST NSW 2302

### QUALITY MONITORING

EPA Id. No. 1 Site Code 5TE8459		Site Description - Discharge to utilisation area															
Pollutant	Unit of Measurement	Sampling Frequency	No. of times measured during the year for licence reporting	Annual Summary 7 July 2013 to 31 December 2013													
				Minimum	Maximum	50%ile Limit	50%ile Actual	90%ile Limit	90%ile Actual	3DGM Limit	3DGM Number of measurements	3DGM Minimum	3DGM Maximum	100%ile Limit	100%ile Actual	Within Limits	
Aluminium	milligrams per litre	Yearly	1	0.27	0.27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BOD	milligrams per litre	Weekly	27	<2	20	N/A	N/A	30	13.4**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes
Cadmium	milligrams per litre	Yearly	1	0.001	0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloride	milligrams per litre	Monthly	5	46	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorophyll a	milligrams per litre	Weekly	27	<0.001	0.114	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium	milligrams per litre	Yearly	1	0.002	0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conductivity	microsiemens per centimetre	Quarterly	2	439	452	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Copper	milligrams per litre	Yearly	1	0.006	0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Faecal Coliforms	colony forming units per 100 mL	Monthly	5	<9	800	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron	milligrams per litre	Yearly	1	1.10	1.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lead	milligrams per litre	Yearly	1	0.001	0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Magnesium	milligrams per litre	Yearly	1	3.7	3.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	milligrams per litre	Yearly	1	0.102	0.102	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury	milligrams per litre	Yearly	1	<0.0005	<0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrate	milligrams per litre	Monthly	5	0.04	1.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrogen (ammonia)	milligrams per litre	Monthly	5	0.21	0.76	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Oil and Grease	milligrams per litre	Monthly	5	<5	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10	<5	Yes
pH	pH	Weekly	27	7.59	9.13	N/A	N/A	6.5 - 8.5	7.83 - 8.27**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Potassium	milligrams per litre	Monthly	5	3.1	4.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Nitrogen	milligrams per litre	Monthly	5	1.76	4	N/A	N/A	30	3.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes
Total Phosphorous	milligrams per litre	Monthly	5	1	3.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Suspended Solids	milligrams per litre	Weekly	27	<1	39	N/A	N/A	40	21.9**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes
Zinc	milligrams per litre	Yearly	1	0.017	0.017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

\*\* Only samples that were taken when discharging to utilisation area have been included for compliance calculations.

EPA Id. No. 2 Site Code		Site Description - Overflow spillway															
Pollutant	Unit of Measurement	Sampling Frequency	No. of times measured during the year for licence reporting	Annual Summary 7 July 2013 to 31 December 2013													
				Minimum	Maximum	50%ile Limit	50%ile Actual	90%ile Limit	90%ile Actual	3DGM Limit	3DGM Number of measurements	3DGM Minimum	3DGM Maximum	100%ile Limit	100%ile Actual	Within Limits	
Biochemical Oxygen Demand	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorophyll a	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrate	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrogen (ammonia)	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Oil and Grease	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10	N/A	N/A
pH	pH	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Nitrogen	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Phosphorous	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Suspended Solids	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

# No samples were collected or analysed during the month as no overflow from the spillway occurred during the year.

EPA Id. No. 5 Site Code		Site Description - Pumped discharge to Wallaroo Creek															
Pollutant	Unit of Measurement	Sampling Frequency	No. of times measured during the year for licence reporting	Annual Summary 7 July 2013 to 31 December 2013													
				Minimum	Maximum	50%ile Limit	50%ile Actual	90%ile Limit	90%ile Actual	3DGM Limit	3DGM Number of measurements	3DGM Minimum	3DGM Maximum	100%ile Limit	100%ile Actual	Within Limits	
Biochemical Oxygen Demand	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorophyll a	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrate	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrogen (ammonia)	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Oil and Grease	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10	N/A	N/A
pH	pH	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Nitrogen	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Phosphorous	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Suspended Solids	milligrams per litre	Special Frequency 1	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

^ No samples were collected or analysed during the month as there was no discharge to Wallaroo Creek during the year.