

Armidale Water Treatment Plant (WTP)

Location: Arundel Drive, Armidale NSW 2350 Environment Protection Licence Number: 2821 Activities: Drinking water treatment
Licensee under Protection of Environment Operations Act 1997 (POEO Act): Armidale Regional Council, PO Box 75A, Armidale NSW 2350

The internet link to Licence No. 2821 is <http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=31138&SYSUID=1&LICID=2821>

Council is required by the New South Wales Environment Protection Authority (EPA) to monitor the quality of water discharging from the final solids settlement pond outlet pit (EPA Point 1) and volume discharged daily. This document details recent results. To meet Council's obligation under Section 66 (6) of the POEO Act, a link to the current version of this document is available on Council's website.

The location of EPA Point No. 1 sampling point is shown on the adjacent figure.

Monitoring results from 31 March 2012 required under the licence are presented in the following tables. New results will be added over the next four years. From then on, the earliest result will be deleted each time a new result becomes available. In this way, the most current four years of results will always be available.

Discharge water quality results are provided in Table 1. Discharge water volumes are provided in Table 2.

Abbreviations in the tables are as follows:

Al = Aluminium; BOD₅ = Biochemical Oxygen Demand over five days; SS = Total suspended solids; mg/L = milligram per litre (equivalent to ppm); kL = kilolitres.



Base map: NSW Department of Lands 2010

Choice of water quality analytes:

Particular analytes are chosen for testing because they give an understanding of the discharge quality of the backwash water. Backwash water cleans the water treatment plant filters and sedimentation tanks and is then allowed to settle in three solids settlement ponds. Testing gives insight into the effectiveness of the water treatment process and how it may affect Rockvale Creek to which the water is discharged.

Reasons for analytes are as follows:

- pH measures if the discharge water is acidic, neutral or alkaline. A neutral pH range between 6.5 and 8.5 is generally preferred so that freshwater aquatic ecosystems are not affected by extreme pH.
- Aluminium compounds are used to coagulate suspended particles in the raw water that arrives at the treatment plant. It is tested at the discharge point to assure that much of the aluminium has dropped out in the settlement tanks and the three solids settlement ponds.
- The BOD₅ test has traditionally been used by wastewater professionals to manage wastewater treatment processes. It is measured by the quantity of oxygen consumed by microorganisms during a five-day period, as a measure of the amount of biodegradable organic material in, or strength of, the wastewater. Wastewater high in BOD can deplete oxygen in receiving waters, causing fish kills and ecosystem changes. A commonly accepted wastewater treatment discharge standard for BOD₅ is 20 mg/L (i.e. 20 mg of O₂ are consumed per litre of water over 5 days to break down the waste).
- Suspended solids (SS) are removed during settlement in the sludge lagoons. Along with BOD₅, SS determines the efficiency of the treatment process. Suspended solids can also smother biota in waterbodies. A commonly accepted treatment standard for suspended solids is 30 mg/L.

Table 1: Discharge water quality EPA Point No. 1 +, Year 2012

EPA Point No. 1	Received from laboratory	Accessible on Council website	pH	AI	AI Rockvale Crossing	BOD	SS
Measure			1-14	mg/L	mg/L	mg/L	mg/L
Sampling date							
04/04/12	11/04/12	23/10/12	7.70	3.500	0.087	3.81	5
11/04/12	18/04/12	23/10/12	7.73	0.278	0.167	2.61	20
18/04/12	24/04/12	23/10/12	7.77	0.283	0.099	3.42	15
24/04/12	02/05/12	23/10/12	7.63	3.500	0.205	3.66	10
02/05/12	09/05/12	23/10/12	7.61	3.500	0.262	16.50	15
09/05/12	16/05/12	23/10/12	7.48	3.500	0.240	4.47	20
16/05/12	16/05/12	23/10/12	7.63	3.500	0.256	4.47	30
23/05/12	30/05/12	23/10/12	7.83	3.500	0.286	7.64	15
30/05/12	06/06/12	23/10/12	7.88	3.060	0.223	4.26	20
06/06/12	13/06/12	23/10/12	7.81	3.500	0.296	6.72	10
13/06/12	20/06/12	23/10/12	7.82	0.309	0.178	5.13	5
20/06/12	27/06/12	23/10/12	7.78	0.350	0.290	6.33	15
27/06/12	04/07/12	23/10/12	7.96	0.350	0.297	4.47	20

EPA Point No. 1	Received from laboratory	Accessible on Council website	pH	AI	AI Rockvale Crossing	BOD	SS
Measure			1-14	mg/L	mg/L	mg/L	mg/L
Sampling date							
04/07/12	11/07/12	23/10/12	7.89	0.289	0.190	5.58	30
11/07/12	18/07/12	23/10/12	7.84	0.350	0.318	9.69	20
18/07/12	25/07/12	23/10/12	7.86	0.326	0.318	5.64	15
25/07/12	01/08/12	23/10/12	7.75	0.350	0.350	4.83	20
01/08/12	07/08/12	23/10/12	7.76	0.287	0.350	6.18	50
07/08/12	15/08/12	23/10/12	7.79	3.500	0.380	8.67	30
15/08/12	22/08/12	23/10/12	7.87	0.348	0.306	7.14	10
22/08/12	29/08/12	23/10/12	7.73	0.384	0.355	5.82	40
29/08/12	04/09/12	23/10/12	7.74	0.392	0.356	6.48	15
04/09/12	12/09/12	23/10/12	7.72	0.291	0.295	7.68	20
12/09/12	19/09/12	23/10/12	7.67	0.302	0.308	6.27	10
19/09/12	26/09/12	23/10/12	7.67	0.283	0.386	7.29	30
26/09/12	03/10/12	23/10/12	7.90	0.269	0.212	11.49	10
10/10/12	17/10/12	23/10/12	7.68	0.086	0.109	12.51	20
17/10/12	24/10/12	03/12/12	7.62	0.094	0.095	4.23	25
24/10/12	31/10/12	03/12/12	7.79	0.127	0.146	7.57	15
31/10/12	07/11/12	03/12/12	7.73	0.106	0.128	5.16	20
07/11/12	14/11/12	03/12/12	7.75	0.109	0.060	6.87	5
14/11/12	22/11/12	03/12/12	7.73	0.140	0.118	6.95	5
22/11/12	28/11/12	03/12/12	7.78	0.138	0.124	6.69	5
28/11/12	5/12/12	14/01/13	7.98	0.147	0.127	2.40	5
5/12/12	12/12/12	14/01/13	7.87	0.129	0.097	2.56	<5
12/12/12	18/12/12	14/01/13	8.01	0.187	0.128	7.84	18
18/12/12	26/12/12	14/01/13	8.01	0.169	0.117	6.37	29

Notes:
 Frequency of testing required by licence is weekly.
 Aluminium samples filtered from October 2012.

Table 2: Discharge volumes Year 2012 for EPA Point No. 1 (from electronic daily backwash flow measurements) Frequency of measurement required by licence is daily, and the daily limit is 2,000 kL.

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
April 2012	6711	0	224	540	23/10/12
May 2012	8384	39	270	608	23/10/12
June 2012	6487	5	216	440	23/10/12

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
July 2012	5204	0	168	400	23/10/12
Aug 2012	5205	5	168	500	23/10/12
Sept 2012	6882	0	229	630	23/10/12
Oct 2012	5782	56	187	350	03/12/12
Nov 2012	4895	0	163	300	03/12/12
Dec 2012	5413	0	175	300	14/01/13

Table 3: Discharge water quality EPA Point No. 1 +, Year 2013

EPA Point No. 1	Received	Accessible	pH	AI			BOD	SS
	from laboratory	on Council website		AI Rockvale Crossing	mg/L	mg/L		
Measure			1-14	mg/L		mg/L	mg/L	
Sampling date								
26/12/12	02/01/13	14/01/13	7.88	0.167	0.126	8.40	15	
02/01/13	09/01/13	25/02/13	7.76	0.158	0.126	9.33	40	
09/01/13	16/01/13	25/02/13	7.50	0.133	0.120	21.80	20	
16/01/13	23/01/13	25/02/13	7.48	0.159	0.129	3.18	60	
23/01/13	30/01/13	25/02/13	8.18	0.236	0.114	5.37	3	
30/01/13	06/02/13	25/02/13	7.96	0.202	0.121	7.62	5	
06/02/13	13/02/13	25/02/13	7.58	0.109	0.079	15.09	26	
13/02/13	20/02/13	25/02/13	7.65	0.143	0.097	3.99	20	
20/02/13	26/02/13	27/03/13	7.69	0.123	0.087	2.40	2	
26/02/13	06/03/13	27/03/13	7.84	0.128	0.093	4.38	31	
06/03/13	13/03/13	27/03/13	7.62	0.143	0.089	4.86	20	
13/03/13	20/03/13	27/03/13	7.91	0.137	0.098	5.94	10	
20/03/13	27/03/13	27/03/13	7.80	0.128	0.098	3.66	5	
27/03/13	03/04/13	08/05/13	7.73	0.167	0.123	3.12	5	
03/04/13	10/04/13	08/05/13	7.84	0.087	0.053	4.32	177	
10/04/13	16/04/13	08/05/13	7.97	0.099	0.076	4.83	10	
16/04/13	24/04/13	08/05/13	7.83	0.067	0.048	3.09	30	
24/04/13	01/05/13	08/05/13	7.79	0.089	0.056	4.05	5	
01/05/13	08/05/13	08/05/13	7.88	0.127	0.119	15.90	5	
08/05/13	15/05/13	11/06/13	7.81	0.143	0.128	6.36	5	
15/05/13	22/05/13	11/06/13	7.96	0.137	0.109	6.36	5	
22/05/13	28/05/13	11/06/13	7.89	0.129	0.097	8.52	5	
28/05/13	05/06/13	11/06/13	7.74	0.104	0.149	2.55	15	

EPA Point No. 1	Received	Accessible	pH	AI			BOD	SS
	from laboratory	on Council website		AI Rockvale Crossing	mg/L	mg/L		
Measure			1-14	mg/L		mg/L	mg/L	
Sampling date								
05/06/13	12/06/13	11/07/13	7.93	0.126	0.088	5.37	5	
12/06/13	19/06/13	11/07/13	7.83	0.109	0.089	3.87	5	
19/06/13	25/06/13	11/07/13	7.70	0.110	0.010	3.81	5	
25/06/13	03/07/13	11/07/13	7.86	0.118	0.047	2.46	5	
03/07/13	10/07/13	06/08/13	7.94	0.126	0.020	4.14	5	
10/07/13	17/07/13	06/08/13	7.93	0.132	0.045	6.00	21	
17/07/13	23/07/13	06/08/13	7.79	0.093	0.086	7.66	5	
23/07/13	30/07/13	06/08/13	7.89	0.031	0.108	5.37	5	
30/07/13	06/08/13	06/08/13	8.06	0.053	0.055	6.80	5	
06/08/13	14/08/13	11/09/13	7.96	0.056	0.050	4.26	13	
14/08/13	20/08/13	11/09/13	8.39	0.199	0.149	5.04	5	
20/08/13	28/08/13	11/09/13	8.07	0.100	0.033	3.40	5	
28/08/13	04/09/13	11/09/13	8.06	0.089	0.037	3.87	10	
04/09/13	10/09/13	09/10/13	7.76	0.142	0.189	2.01	15	
10/09/13	18/09/13	09/10/13	7.82	0.141	0.153	3.87	15	
18/09/13	25/09/13	09/10/13	8.03	0.139	0.142	2.64	5	
25/09/13	02/10/13	09/10/13	8.09	0.240	0.225	3.99	10	
02/10/13	09/10/13	07/11/13	7.91	0.260	0.089	4.71	10	
09/10/13	16/10/13	07/11/13	7.75	0.252	0.248	3.69	5	
16/10/13	22/10/13	07/11/13	8.15	0.198	0.146	13.83	5	
22/10/13	29/10/13	07/11/13	7.43	0.63	0.019	8.94	5	
29/10/13	05/11/13	07/11/13	7.78	0.142	0.120	7.38	5	
05/11/13	13/11/13	04/12/13	7.89	0.137	0.106	6.69	10	

Table 4: Discharge volumes Year 2013 for EPA Point No. 1 (from electronic daily backwash flow measurements) Frequency of measurement required by licence is daily, and the daily limit is 2,000 kL.

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
Jan 2013	9195	55	297	488	25/02/13
Feb 2013	7102	0	254	629	27/03/13
Mar 2013	4003	0	129	250	08/05/13
April 2013	3905	0	130	300	08/05/13
May 2013	4385	49	141	370	11/06/13
June 2013	3864	50	129	270	11/07/13

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
July 2013	4274	36	138	300	06/08/13
Aug 2013	5299	60	171	560	11/09/13
Sept 2013	5292	60	176	330	09/10/13
Oct 2013	6007	0	194	537	07/11/13
Nov 2013	5410	60	180	350	04/12/13
Dec 2013	6612	0	213	400	02/01/14

Table 5: Discharge water quality EPA Point No. 1 +, Year 2013 & 2014

EPA Point No. 1	Received	Accessible	pH	AI			BOD	SS
	from laboratory	on Council website		AI	Rockvale Crossing	mg/L		
Measure			1-14	mg/L			mg/L	mg/L
Sampling date								
13/11/13	20/11/13	04/12/13	8.05	0.134	0.098	10.5	5	
20/11/13	26/11/13	04/12/13	7.99	0.147	0.102	9.87	10	
26/11/13	03/12/13	04/12/13	7.73	0.098	0.065	9.3	10	
03/12/13	10/12/13	02/01/14	8.02	0.259	0.097	4.23	5	
10/12/13	17/12/13	02/01/14	8.03	0.387	0.117	9.42	5	
17/12/13	24/12/13	02/01/14	7.94	0.263	0.081	9.42	5	
24/12/13	31/12/13	02/01/14	7.99	0.356	0.189	10.41	5	
31/12/13	07/01/14	13/02/14	8.10	0.387	0.196	7.5	35	
07/01/14	15/01/14	13/02/14	7.99	0.190	0.088	5.07	15	
15/01/14	22/01/14	13/02/14	7.97	0.196	0.086	12.80	10	
22/01/14	29/01/14	13/02/14	7.75	0.086	0.165	15.09	5	
29/01/14	04/02/14	13/02/14	7.66	0.083	0.096	11.30	10	
04/02/14	11/02/14	05/03/14	7.87	0.092	0.107	14.10	5	
11/02/14	18/02/14	05/03/14	8.25	0.126	0.169	7.02	5	
18/02/14	25/02/14	05/03/14	8.82	0.140	0.035	8.34	5	
25/02/14	05/03/14	05/03/14	8.90	0.220	0.082	4.41	10	
05/03/14	11/03/14	07/04/14	8.54	0.260	0.147	5.57	5	
11/03/14	18/04/14	07/04/14	8.21	0.247	0.157	5.43	5	
18/03/14	25/03/14	07/04/14	8.12	0.023	0.135	6.84	10	
25/03/14	02/04/14	07/04/14	8.16	0.107	0.089	7.26	5	
02/04/14	09/04/14	09/05/14	7.99	0.225	0.061	8.28	10	
09/05/14	15/04/14	09/05/14	7.93	0.217	0.108	7.83	15	
15/04/14	22/05/14	09/05/14	8.10	0.189	0.103	8.40	5	
22/04/14	29/04/14	09/05/14	7.98	0.210	0.141	8.88	5	

EPA Point No. 1	Received	Accessible	pH	AI			BOD	SS
	from laboratory	on Council website		AI	Rockvale Crossing	mg/L		
Measure			1-14	mg/L			mg/L	mg/L
Sampling date								
29/04/14	06/05/14	09/05/14	7.96	0.178	0.084	3.42	10	
06/05/14	13/05/14	06/06/14	7.83	0.126	0.076	14.49	10	
13/05/14	20/05/14	06/06/14	8.28	0.135	0.097	20.70	5	
20/05/14	27/05/14	06/06/14	8.16	0.122	0.088	16.20	5	
27/05/14	03/06/14	06/06/14	7.71	0.127	0.096	8.16	27	
03/06/14	10/06/14	08/07/14	7.73	0.128	0.109	10.44	10	
10/06/14	17/06/14	08/07/14	7.7	0.137	0.097	4.74	5	
17/06/14	24/06/14	08/07/14	7.94	0.143	0.096	3.81	20	
24/06/14	01/07/14	08/07/14	7.89	0.067	0.043	3.36	15	
01/07/14	08/07/14	08/08/14	8.05	0.092	0.073	12.03	15	
08/07/14	15/07/14	08/08/14	8.06	0.108	0.087	25.06	80	
15/07/14	22/07/14	08/08/14	7.77	0.046	0.068	4.29	40	
22/07/14	29/07/14	08/08/14	7.77	0.042	0.074	12.15	10	
29/07/14	05/08/14	08/08/14	7.71	0.063	0.082	25.2	120	
05/08/14	12/08/14	11/09/14	7.70	0.057	0.083	25.35	60	
12/08/14	19/08/14	11/09/14	7.55	0.043	0.059	7.35	5	
19/08/14	26/08/14	11/09/14	7.68	0.039	0.057	3.75	50	
26/08/14	02/09/14	11/09/14	7.53	0.037	0.057	3.57	10	
02/09/14	09/09/14	07/10/14	7.42	0.068	0.121	6.27	10	
09/09/14	16/09/14	07/10/14	7.44	0.059	0.098	1.62	12	
16/09/14	23/09/14	07/10/14	7.48	0.056	0.088	2.07	10	
23/09/14	30/09/14	07/10/14	7.49	0.049	0.063	2.13	12	
30/09/14	07/10/14	07/10/14	7.40	0.057	0.078	0.38	5	
07/10/14	14/10/14	07/11/14	7.48	0.056	0.079	3.30	20	

Table 6: Discharge volumes Year 2014 for EPA Point No. 1 (from electronic daily backwash flow measurements) Frequency of measurement required by licence is daily, and the daily limit is 2,000 kL.

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
Jan 2014	8824	70	285	785	13/02/14
Feb 2014	10722	140	383	600	05/03/14
Mar 2014	8568	80	276	520	07/04/14
April 2014	7797	170	260	400	09/05/14
May 2014	7325	90	236	400	06/06/14
June 2014	7332	100	244	455	08/07/14

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
July 2014	7532	91	243	500	08/08/14
Aug 2014	8380	70	270	500	11/09/14
Sept 2014	6978	100	233	410	07/10/14
Oct 2014	8353	70	269	515	07/11/14
Nov 2014	12768	200	426	720	04/12/14
Dec 2014	9733	70	314	600	19/01/15

Table 7: Discharge water quality EPA Point No. 1 +, Year 2014 & 2015

EPA Point No. 1	Received	Accessible	pH	AI		BOD	SS
	from laboratory	on Council website		AI Rockvale Crossing	mg/L		
Measure			1-14	mg/L		mg/L	mg/L
Sampling date							
14/10/14	21/10/14	07/11/14	7.46	0.129	0.238	3.21	10
21/10/14	28/10/14	07/11/14	7.20	0.138	0.246	28	2
28/10/14	04/11/14	07/11/14	7.16	0.087	0.098	5.68	10
04/11/14	11/11/14	04/12/14	7.27	0.029	0.072	5.07	5
11/11/14	18/11/14	04/12/14	7.46	0.039	0.089	6.03	4
18/11/14	25/11/14	04/12/14	7.49	0.040	0.067	9.06	8
25/11/14	02/12/14	04/12/14	7.32	0.076	0.184	9.66	12
02/12/14	09/12/14	19/01/15	7.58	0.060	0.102	7.17	8
09/12/14	16/12/14	19/01/15	7.39	0.034	0.079	6.99	15
16/12/14	23/12/14	19/01/15	7.67	0.059	0.097	7.77	5
23/12/14	30/12/14	19/01/15	7.62	0.037	0.047	4.77	45
30/12/14	07/01/15	19/01/15	7.92	0.089	0.080	9.66	65
07/01/15	14/01/15	10/02/15	7.41	0.069	0.080	7.71	15
14/01/15	21/01/15	10/02/15	7.43	0.153	0.060	5.40	30
21/01/15	28/01/15	10/02/15	7.46	0.146	0.065	7.77	28
28/01/15	03/02/15	10/02/15	7.89	0.021	0.013	12.36	24
03/02/15	10/02/15	06/03/15	7.47	0.009	0.107	21.66	20
10/02/15	17/02/15	06/03/15	7.35	0.101	0.116	10.35	50
17/02/15	24/02/15	06/03/15	7.63	0.087	0.120	6.30	15
24/02/15	03/03/15	06/03/15	7.36	0.032	0.046	12.60	25
03/03/15	10/03/15	15/04/15	7.41	0.053	0.050	7.38	30
10/03/15	17/03/15	15/04/15	7.37	0.048	0.069	15.27	25
17/03/15	25/03/15	15/04/15	7.43	0.057	0.067	11.85	15
25/03/15	31/03/15	15/04/15	7.18	0.032	0.037	15.39	20

EPA Point No. 1	Received	Accessible	pH	AI		BOD	SS
	from laboratory	on Council website		AI Rockvale Crossing	mg/L		
Measure			1-14	mg/L		mg/L	mg/L
Sampling date							
31/03/15	07/04/15	15/04/15	7.37	0.029	0.035	6.15	30
07/04/15	14/04/15	13/05/15	7.29	0.028	0.024	20.91	40
14/04/15	21/04/15	13/05/15	7.52	0.043	0.053	11.85	10
21/04/15	28/04/15	13/05/15	7.65	0.049	0.057	19.26	30
28/04/15	05/05/15	13/05/15	7.49	0.043	0.067	9.84	20
05/05/15	12/05/15	10/06/15	7.32	0.037	0.056	7.40	40
12/05/15	19/05/15	10/06/15	7.66	0.039	0.049	6.93	10
19/05/15	26/05/15	10/06/15	7.84	0.037	0.042	12.06	20
26/05/15	02/06/15	10/06/15	7.68	0.044	0.056	9.33	35
02/06/15	09/06/15	10/07/15	7.67	0.047	0.058	5.10	35
09/06/15	16/06/15	10/07/15	7.69	0.039	0.048	9.36	30
16/06/15	23/06/15	10/07/15	7.55	0.042	0.052	5.22	15
23/06/15	30/06/15	10/07/15	7.34	0.039	0.059	4.17	5
30/06/15	07/07/15	10/07/15	7.49	0.038	0.053	7.35	20
07/07/15	14/07/15	13/08/15	7.71	0.078	0.089	9.15	20
14/07/15	21/07/15	13/08/15	7.57	0.074	0.082	25.05	85
21/07/15	28/07/15	13/08/15	7.31	0.079	0.089	6.06	400
28/07/15	04/08/15	13/08/15	7.47	0.082	0.089	3.42	120
04/08/15	11/08/15	08/09/15	7.76	0.045	0.053	22.11	80
11/08/15	18/08/15	08/09/15	7.43	0.041	0.049	4.50	30
18/08/15	25/08/15	08/09/15	7.61	0.039	0.047	5.67	10
25/08/15	01/09/15	08/09/15	7.53	0.039	0.032	12.54	15
01/09/15	08/09/15	14/09/15	7.61	0.065	0.032	8.55	15
08/09/15	15/09/15	14/10/15	7.52	0.063	0.039	3.33	5

Table 8: Discharge volumes Year 2015 for EPA Point No. 1 (from electronic daily backwash flow measurements) Frequency of measurement required by licence is daily, and the daily limit is 2,000 kL.

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
Jan 2015	7268	82	234	449	10/02/15
Feb 2015	7599	80	271	500	06/03/15
Mar 2015	8248	60	266	600	15/04/15
April 2015	6981	100	233	429	13/05/15
May 2015	6776	50	219	400	10/06/15
June 2015	6110	0	204	440	10/07/15

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
July 2015	6650	80	215	469	13/08/15
Aug 2015	8346	70	269	500	08/09/15
Sept 2015	7333	0	244	403	14/10/15
Oct 2015	7395	70	239	400	17/11/15
Nov 2015	8305	80	277	700	15/12/15
Dec 2015	7865	50	254	590	25/01/16

Table 9: Discharge water quality EPA Point No. 1 +, Year 2015 & 2016

EPA Point No. 1	Received	Accessible	pH	AI		BOD	SS
	from laboratory	on Council website		AI	Rockvale Crossing		
Measure			1-14	mg/L		mg/L	mg/L
Sampling date							
15/09/15	22/09/15	14/10/15	7.38	0.061	0.049	6.51	80
22/09/15	29/09/15	14/10/15	7.43	0.059	0.053	2.04	100
29/09/15	06/10/15	14/10/15	7.39	0.037	0.032	25.35	100
06/10/15	13/10/15	17/11/15	7.35	0.059	0.051	4.05	5
13/10/15	20/10/15	17/11/15	7.39	0.056	0.067	3.96	40
20/10/15	27/10/15	17/11/15	7.38	0.023	0.034	8.64	80
27/10/15	03/11/15	17/11/15	7.54	0.069	0.082	12.12	80
03/11/15	10/11/15	15/12/15	7.59	0.072	0.087	16.68	140
10/11/15	17/11/15	15/12/15	7.50	0.067	0.074	3.51	80
17/11/15	24/11/15	15/12/15	7.47	0.069	0.079	9.33	180
24/11/15	01/12/15	15/12/15	7.72	0.054	0.064	9.18	10
01/12/15	08/12/15	25/01/16	7.51	0.046	0.053	8.40	15
08/12/15	15/12/15	25/01/16	7.68	0.047	0.089	9.54	60
15/12/15	22/12/15	25/01/16	7.80	0.031	0.058	15.66	60
22/12/15	31/12/15	25/01/16	7.48	0.039	0.063	6.18	200
31/12/15	07/01/16	25/01/16	7.50	0.042	0.068	23.22	133
07/01/16	13/01/16	17/02/16	7.86	0.101	0.078	13.26	27
13/01/16	20/01/16	17/02/16	7.68	0.096	0.082	5.34	520
20/01/16	26/01/16	17/02/16	7.62	0.208	0.208	4.80	200
26/01/16	02/02/16	17/02/16	8.20	0.034	0.057	17.58	5
02/02/16	09/02/16	18/03/16	7.29	0.047	0.069	14.80	240
09/02/16	16/02/16	18/03/16	7.26	0.049	0.073	5.01	240
16/02/16	23/02/16	18/03/16	7.32	0.059	0.082	9.36	200
23/02/16	01/03/16	18/03/16	7.50	0.032	0.043	8.49	280

EPA Point No. 1	Received	Accessible	pH	AI		BOD	SS
	from laboratory	on Council website		AI	Rockvale Crossing		
Measure			1-14	mg/L		mg/L	mg/L
Sampling date							
01/03/16	08/03/16	12/04/16	7.78	0.039	0.047	8.37	200
08/03/16	15/03/16	12/04/16	7.42	0.042	0.056	5.85	700
15/03/16	22/03/16	12/04/16	7.63	0.084	0.090	3.09	200
22/03/16	29/03/16	12/04/16	7.57	0.089	0.098	4.68	120
29/03/16	04/04/16	12/04/16	7.57	0.052	0.095	2.70	360
05/04/16	12/04/16	24/05/16	7.65	0.059	0.074	3.24	60
12/04/16	18/04/16	24/05/16	7.64	0.063	0.079	1.32	280
18/04/16	26/04/16	24/05/16	7.43	0.065	0.082	4.71	280
26/04/16	03/05/16	24/05/16	7.38	0.037	0.076	3.25	120
03/05/16	10/05/16	17/06/16	7.37	0.026	0.074	2.70	15
10/05/16	17/05/16	17/06/16	7.46	0.029	0.057	25.32	160
17/05/16	24/05/16	17/06/16	7.37	0.034	0.059	8.70	400
24/05/16	31/05/16	17/06/16	7.41	0.037	0.056	7.80	280
31/05/16	07/06/16	17/06/16	7.38	0.021	0.046	25.80	280
07/06/16	14/06/16	18/07/16	7.42	0.031	0.043	9.78	320
14/06/16	21/06/16	18/07/16	7.49	0.033	0.046	17.13	60
21/06/16	28/06/16	18/07/16	7.50	0.029	0.039	5.55	160
28/06/16	05/07/16	18/07/16	7.56	0.038	0.027	5.10	700
05/07/16	12/07/16	18/07/16	7.45	0.042	0.044	7.71	10
12/07/16	19/07/16	14/09/16	7.76	0.039	0.047	10.50	40
19/07/16	02/08/16	14/09/16	7.39	0.034	0.037	3.48	100
25/07/16	02/08/16	14/09/16	7.47	0.032	0.039	3.45	40
02/08/16	09/08/16	14/09/16	7.52	0.037	0.040	16.92	80
09/08/16	16/08/16	14/09/16	7.63	0.034	0.037	5.43	75

Table 10: Discharge volumes Year 2016 for EPA Point No. 1 (from electronic daily backwash flow measurements) Frequency of measurement required by licence is daily, and the daily limit is 2,000 kL.

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
Jan 2016	6981	70	225	470	17/02/2016
Feb 2016	9102	100	314	550	18/03/2016
Mar 2016	9947	155	321	500	12/04/2016
April 2016	8104	70	270	600	24/05/2016
May 2016	8396	100	271	571	17/06/2016
June 2016	7427	70	248	508	18/07/2016

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
July 2016	5812	0	187	400	14/09/2016
Aug 2016	7145	0	230	530	14/09/2016
Sept 2016	6717	0	224	450	18/10/2016
Oct 2016	5959	70	192	400	23/11/2016
Nov 2016	6538	70	218	470	22/12/2016
Dec 2016	7523	70	245	560	02/02/2017

Table 11: Discharge water quality EPA Point No. 1 +, Year 2016 & 2017

EPA Point No. 1	Received	Accessible	pH	AI			
	from laboratory	on Council website		AI	Rockvale Crossing	BOD	SS
Measure			1-14	mg/L		mg/L	mg/L
Sampling date							
16/08/16	23/08/16	14/09/16	7.59	0.047	0.051	7.56	40
23/08/16	29/08/16	14/09/16	7.63	0.056	0.034	9.00	75
29/08/16	05/09/16	14/09/16	7.39	0.059	0.047	3.36	300
05/09/16	12/09/16	18/10/16	7.33	0.068	0.040	6.03	400
12/09/16	19/09/16	18/10/16	7.53	0.026	0.050	6.66	5
19/09/16	27/09/16	18/10/16	7.59	0.029	0.040	11.49	20
27/09/16	04/10/16	18/10/16	7.52	0.024	0.049	3.48	10
04/10/16	10/10/16	23/11/16	7.70	0.030	0.040	6.99	120
10/10/16	17/10/16	23/11/16	7.34	0.026	0.032	8.34	450
17/10/16	24/10/16	23/11/16	7.72	0.028	0.022	3.49	400
24/10/16	31/10/16	23/11/16	7.60	0.026	0.019	12.36	80
31/10/16	07/11/16	23/11/16	7.38	0.029	0.016	4.56	360
07/11/16	15/11/16	22/12/16	7.48	0.027	0.014	5.16	60
15/11/16	22/11/16	22/12/16	7.49	0.029	0.020	6.51	60
22/11/16	28/11/16	22/12/16	7.43	0.037	0.039	23.78	15
28/11/16	06/12/16	22/12/16	7.47	0.039	0.031	5.73	180
06/12/16	14/12/16	22/12/16	7.43	0.041	0.049	7.50	100
14/12/16	20/12/16	02/02/17	7.89	0.039	0.037	2.67	600
20/12/16	27/12/16	02/02/17	7.58	0.043	0.033	5.64	120
27/12/16	03/01/17	02/02/17	7.67	0.039	0.033	5.28	15
03/01/17	10/01/17	02/02/17	7.69	0.043	0.039	16.98	10
10/01/17	17/01/17	02/02/17	7.68	0.038	0.036	6.51	20
17/01/17	23/01/17	02/02/17	7.22	0.122	0.254	13.32	15
23/01/17	31/01/17	02/02/17	7.39	0.053	0.187	3.96	5

EPA Point No. 1	Received	Accessible	pH	AI			
	from laboratory	on Council website		AI	Rockvale Crossing	BOD	SS
Measure			1-14	mg/L		mg/L	mg/L
Sampling date							
31/01/17	07/02/17	14/03/17	7.39	0.053	0.187	2.40	200
07/02/17	13/02/17	14/03/17	7.27	0.047	0.106	10.23	320
13/02/17	21/02/17	14/03/17	7.51	0.049	0.089	6.99	320
21/02/17	28/02/17	14/03/17	7.63	0.043	0.067	5.61	5
28/02/17	06/03/17	14/03/17	7.64	0.046	0.059	9.36	10
06/03/17	14/03/17	26/04/17	7.82	0.096	0.108	5.94	20
14/03/17	21/03/17	26/04/17	7.83	0.087	0.099	7.68	40
21/03/17	28/03/17	26/04/17	7.91	0.048	0.039	11.46	10
28/03/17	04/04/17	26/04/17	7.87	0.039	0.037	17.28	4
04/04/17	11/04/17	26/04/17	7.51	0.043	0.049	6.51	20
11/04/17	18/04/17	24/05/17	7.24	0.037	0.045	5.67	320
18/04/17	25/04/17	24/05/17	7.64	0.039	0.047	7.53	40
25/04/17	02/05/17	24/05/17	7.78	0.042	0.049	10.29	80
02/05/17	09/05/17	24/05/17	8.10	0.068	0.089	9.60	10
09/05/17	16/05/17	24/05/17	7.80	0.081	0.101	5.25	240
16/05/17	23/05/17	24/05/17	7.58	0.076	0.099	7.17	240
23/05/17	30/05/17	21/06/17	7.74	0.076	0.089	3.78	100
30/05/17	06/06/17	21/06/17	7.74	0.077	0.090	5.43	60
06/06/17	13/06/17	21/06/17	7.59	0.063	0.079	4.53	60
13/06/17	20/06/17	21/06/17	7.76	0.067	0.073	13.74	140
22/06/17	27/06/17	27/06/17	7.69	0.063	0.078	7.56	220
27/06/17	04/07/17	27/07/17	7.78	0.058	0.067	3.87	100
04/07/17	12/07/17	27/07/17	7.80	0.049	0.069	4.32	160
12/07/17	18/07/17	27/07/17	7.39	0.053	0.078	5.13	60

Table 12: Discharge volumes Year 2017 for EPA Point No. 1 (from electronic daily backwash flow measurements) Frequency of measurement required by licence is daily, and the daily limit is 2,000 kL.

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
Jan 2017	6573	85	212	500	02/02/2017
Feb 2017	7181	90	256	500	14/03/2017
Mar 2017	7090	60	229	470	26/04/2017
April 2017	5748	60	192	413	24/05/2017
May 2017	6164	70	199	436	21/06/2017
June 2017	7083	0	236	500	27/07/2017

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
July 2017	6789	60	219	500	19/09/2017
Aug 2017	6578	70	212	587	19/09/2017
Sept 2017	7251	80	242	409	13/11/2017
Oct 2017	6954	70	224	650	13/11/2017
Nov 2017	5671	70	189	440	13/12/2017
Dec 2017	8319	80	263	570	01/02/2018

Table 13: Discharge water quality EPA Point No. 1 +, Year 2017 & 2018

EPA Point No. 1	Received	Accessible	pH	AI			
	from laboratory	on Council website		AI	Rockvale Crossing	BOD	SS
Measure			1-14	mg/L	mg/L		mg/L
Sampling date							
18/07/17	25/07/17	27/07/17	7.47	0.064	0.069	5.28	80
25/07/17	01/08/17	19/09/17	7.67	0.069	0.073	12.15	40
01/08/17	08/08/17	19/09/17	7.83	0.032	0.041	13.89	80
08/08/17	15/08/17	19/09/17	7.47	0.038	0.044	6.21	60
15/08/17	22/08/17	19/09/17	7.40	0.032	0.039	19.80	18
22/08/17	29/08/17	19/09/17	7.72	0.037	0.053	26.82	8
29/08/17	05/09/17	19/09/17	7.43	0.046	0.063	15.96	53
05/09/17	12/09/17	13/11/17	7.49	0.047	0.065	5.70	360
12/09/17	19/09/17	13/11/17	7.28	0.030	0.045	14.04	267
19/09/17	26/09/17	13/11/17	7.47	0.048	0.067	25.53	160
26/09/17	04/10/17	13/11/17	7.45	0.049	0.074	7.77	120
04/10/17	10/10/17	13/11/17	7.76	0.037	0.058	4.50	150
10/10/17	17/10/17	13/11/17	7.90	0.039	0.046	9.45	75
17/10/17	24/10/17	13/11/17	7.51	0.034	0.034	13.08	25
24/10/17	31/10/17	13/11/17	7.42	0.034	0.038	3.48	10
31/10/17	07/11/17	13/11/17	7.29	0.043	0.065	4.35	10
07/11/17	14/11/17	13/12/17	7.39	0.046	0.067	6.15	5
14/11/17	21/11/17	13/12/17	7.39	0.047	0.062	3.18	175
21/11/17	28/11/17	13/12/17	7.59	0.039	0.062	3.48	240
28/11/17	05/12/17	13/12/17	7.45	0.048	0.073	6.12	100
05/12/17	12/12/17	13/12/17	7.39	0.026	0.033	4.17	20
12/12/17	19/12/17	01/02/18	7.38	0.032	0.048	8.73	120
19/12/17	26/12/17	01/02/18	7.42	0.043	0.059	5.28	80
26/12/18	02/01/18	01/02/18	7.63	0.039	0.067	5.79	50

EPA Point No. 1	Received	Accessible	pH	AI			
	from laboratory	on Council website		AI	Rockvale Crossing	BOD	SS
Measure			1-14	mg/L	mg/L		mg/L
Sampling date							
02/01/18	09/01/18	01/02/18	7.67	0.049	0.078	11.67	400
09/01/18	16/01/18	01/02/18	7.43	0.066	0.089	9.24	40
16/01/18	23/01/18	01/02/18	7.49	0.043	0.043	7.80	10
23/01/18	30/01/18	01/02/18	7.28	0.083	0.118	7.26	15
30/01/18	06/02/18	24/04/18	7.27	0.079	0.102	2.46	15
06/02/18	13/02/18	24/04/18	7.43	0.047	0.08	6.24	15
13/02/18	20/02/18	24/04/18	7.03	0.024	0.043	2.22	60
20/02/18	27/02/18	24/04/18	7.48	0.067	0.078	3.48	440
27/02/18	06/03/18	24/04/18	7.53	0.056	0.087	5.40	150
06/03/18	12/03/18	24/04/18	7.47	0.059	0.073	7.62	30
12/03/18	19/03/18	24/04/18	7.93	0.110	0.082	5.76	16
19/03/18	27/03/18	24/04/18	7.35	0.162	0.220	8.40	320
27/03/18	03/04/18	24/04/18	7.29	0.159	0.213	2.97	13
03/04/18	10/04/18	24/04/18	7.67	0.161	0.214	4.35	100
10/04/18	17/04/18	21/06/18	7.46	0.156	0.210	4.35	100
17/04/18	24/04/18	21/04/18	7.49	0.156	0.190	6.42	200
24/04/18	01/05/18	21/06/18	7.50	0.163	0.190	9.12	34
01/05/18	08/05/18	21/06/18	7.53	0.164	0.197	5.46	333
08/05/18	15/05/18	21/06/18	7.40	0.189	0.200	1.59	60
15/05/18	22/05/18	21/06/18	7.52	0.067	0.098	3.36	80
22/05/18	28/05/18	21/06/18	7.55	0.047	0.076	6.99	100
28/05/18	05/06/18	21/06/18	7.67	0.084	0.044	5.88	23
05/06/18	12/06/18	21/06/18	7.46	0.079	0.092	3.72	100

Table 14: Discharge volumes Year 2018 for EPA Point No. 1 (from electronic daily backwash flow measurements) Frequency of measurement required by licence is daily, and the daily limit is 2,000 kL.

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
Jan 2018	7571	67	244	433	24/04/18
Feb 2018	6809	80	243	490	24/04/18
Mar 2018	6286	60	203	339	24/04/18
April 2018	6325	30	211	493	21/06/18
May 2018	7100	66	229	493	21/06/18
June 2018	5626	70	188	320	02/08/18

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
July 2018	5479	76	177	340	02/08/18
Aug 2018	6449	65	208	390	25/09/18
Sept 2018	5374	70	179	446	20/11/18
Oct 2018	6592	60	213	712	20/11/18
Nov 2018	8105	90	270	700	05/02/19
Dec 2018	10835	150	349	600	05/02/19

Table 15: Discharge water quality EPA Point No. 1 +, Year 2018 & 2019

EPA Point No. 1	Received	Accessible	pH	AI			BOD	SS
	from laboratory	on Council website		AI	Rockvale Crossing	mg/L		
Measure			1-14	mg/L			mg/L	mg/L
Sampling date								
12/06/18	19/06/18	02/08/18	7.48	0.082	0.091	3.51	53	
19/06/18	26/06/18	02/08/18	7.43	0.039	0.047	5.22	250	
26/06/18	03/07/18	02/08/18	7.46	0.043	0.034	2.88	10	
03/07/18	10/07/18	02/08/18	7.42	0.047	0.056	3.18	5	
10/07/18	17/07/18	02/08/18	7.56	0.039	0.048	2.76	10	
17/07/18	24/07/18	02/08/18	7.80	0.029	0.038	5.52	80	
24/07/18	31/07/18	02/08/18	7.70	0.033	0.042	13.41	5	
31/07/18	07/09/18	02/08/18	7.68	0.038	0.057	12.33	175	
07/08/18	14/08/18	25/09/18	7.73	0.043	0.062	7.59	10	
14/08/18	21/08/18	25/09/18	7.90	0.026	0.034	9.69	67	
21/08/18	28/08/18	25/09/18	7.98	0.032	0.043	25.83	7	
28/08/18	04/09/18	25/09/18	7.90	0.036	0.045	6.93	10	
04/09/18	11/09/18	25/09/18	7.61	0.029	0.035	9.63	75	
11/09/18	18/11/18	20/11/18	8.06	0.038	0.042	2.64	30	
18/09/18	25/09/18	20/11/18	7.88	0.037	0.048	15.84	20	
25/09/18	02/10/18	20/11/18	7.56	0.039	0.056	23.91	80	
02/10/18	09/10/18	20/11/18	7.48	0.043	0.059		280	
09/10/18	16/10/18	20/11/18	7.59	0.057	0.063		10	
16/10/18	23/10/18	20/11/18	7.57	0.039	0.047		15	
23/10/18	30/10/18	20/11/18	7.67	0.043	0.049	9.30	50	
30/10/18	06/11/18	20/11/18	7.75	0.047	0.053	10.94	10	
06/11/18	12/11/18	06/02/19	7.43	0.053	0.059	12.66	120	
12/11/18	20/11/18	06/02/19	7.83	0.064	0.072	10.26	15	
20/11/18	27/11/18	06/02/19	7.63	0.067	0.074	16.74	140	

EPA Point No. 1	Received	Accessible	pH	AI			BOD	SS
	from laboratory	on Council website		AI	Rockvale Crossing	mg/L		
Measure			1-14	mg/L			mg/L	mg/L
Sampling date								
27/11/18	04/12/18	05/02/19	7.53	0.069	0.072	12.90	80	
04/12/18	11/12/18	05/02/19	7.54	0.067	0.043	7.95	80	
11/12/18	18/12/18	05/02/19	7.43	0.108	0.031	16.23	60	
18/12/18	24/12/18	05/02/19	7.48	0.112	0.037	7.42	13	
24/12/18	01/01/19	05/02/19	7.58	0.078	0.049			
01/01/19	08/01/19	05/02/19	7.54	0.065	0.073	5.13		
08/01/19	15/01/19	05/02/19	7.50	0.067	0.079	3.51	280	
15/01/19	22/01/19	05/02/19	7.47	0.073	0.086	4.17	100	
22/01/19	29/01/19	05/02/19	7.45	0.061	0.086	22.8	17	
29/01/19	05/02/19	27/03/19	7.43	0.067	0.072	17.70	240	
05/02/19	12/02/19	27/03/19	7.61	0.078	0.079	13.14	60	
12/02/19	19/02/19	27/03/19	7.60	0.078	0.089	7.11	13	
19/02/19	25/02/19	27/03/19	7.56	0.068	0.091	5.43	80	
25/02/19	05/03/19	27/03/19	7.60	0.056	0.093	6.75	40	
05/03/19	12/03/19	01/07/19	7.60	0.053	0.078	4.26	300	
12/03/19	19/03/19	01/07/19	7.46	0.049	0.076	5.76	15	
19/03/19	26/03/19	01/07/19	7.56	0.089	0.107	14.25	160	
26/03/19	02/04/19	01/07/19	7.58	0.067	0.089	1.74	10	
02/04/19	09/04/19	01/07/19	7.70	0.059	0.073	11.52	5	
09/04/19	15/04/19	01/07/19	7.60	0.064	0.087	2.58	20	
15/04/19	23/04/19	01/07/19	7.54	0.071	0.081	10.11	160	
23/04/19	30/04/19	01/07/19	7.76	0.078	0.084	5.76	120	
30/04/19	06/05/19	01/07/19	7.49	0.079	0.093	7.35	120	
06/05/19	14/05/19	01/07/19	7.78	0.087	0.089	6.27	80	

Table 16: Discharge volumes Year 2019 for EPA Point No. 1 (from electronic daily backwash flow measurements) Frequency of measurement required by licence is daily, and the daily limit is 2,000 kL.

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
Jan 2019	15763	194	508	800	05/02/19
Feb 2019	10689	85	382	654	27/03/19
Mar 2019	12362	70	399	848	01/07/19
April 2019	10581	150	353	582	01/07/19
May 2019	7760	82	250	530	01/07/19
June 2019	5894	0	197	320	01/07/19

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
July 2019	6104	60	190	313	08/08/2019
Aug 2019	4949	30	159	300	02/10/2019
Sept 2019	5731	0	191	380	02/10/2019
Oct 2019	5265	30	170	308	21/11/2019
Nov 2019	5769	0	192	400	05/02/2020
Dec 2019	7984	0	258	615	05/02/2020

Table 16: Discharge water quality EPA Point No. 1 +, Year 2019 & 2020

EPA Point No. 1	Received	Accessible	pH	AI			BOD	SS
	from laboratory	on Council website		AI	Rockvale Crossing	mg/L		
Measure			1-14	mg/L			mg/L	mg/L
Sampling date								
14/05/19	21/05/19	01/07/19	7.64	0.082	0.089	5.04	100	
21/05/19	28/05/19	01/07/19	7.57	0.079	0.088	18.63	120	
28/05/19	04/06/19	01/07/19	7.58	0.056	0.077	8.67	200	
04/06/19	11/06/19	01/07/19	7.83	0.076	0.093	5.97	30	
11/06/19	18/06/19	01/07/19	7.63	0.068	0.089	9.06	80	
18/06/19	25/06/19	01/07/19	7.87	0.074	0.086	25.80	6	
25/06/19	02/07/19	01/07/19	7.57	0.076	0.067	9.06	13	
02/07/19	09/07/19	08/08/19	7.64	0.039	0.067	23.97	13	
09/07/19	16/07/19	08/08/19	7.53	0.027	0.067	17.28	80	
16/07/19	23/07/19	08/08/19	7.75	0.037	0.054	9.00	80	
23/07/19	30/07/19	08/08/19	7.78	0.052	0.088	21.75	5	
30/07/19	06/08/19	08/08/19	7.68	0.054	0.075	4.08	60	
06/08/19	13/08/19	08/08/19	7.80	0.053	0.069	5.07	10	
13/08/19	19/08/19	02/10/19	7.89	0.056	0.067	18.87	80	
19/08/19	27/08/19	02/10/19	7.86	0.052	0.081	14.10	11	
27/08/19	03/09/19	02/10/19	7.52	0.056	0.089	11.67	80	
03/09/19	10/09/19	02/10/19	7.67	0.059	0.093	4.32	120	
10/09/19	17/09/19	02/10/19	7.72	0.033	0.038	7.23	75	
17/09/19	24/09/19	02/10/19	7.60	0.035	0.039	11.82	160	
24/09/19	01/10/19	02/10/19	7.57	0.057	0.043	19.00	88	
01/10/19	08/10/19	21/11/19	7.60	0.063	0.080	20	200	
08/10/19	15/10/19	21/11/19	7.98	0.078	0.084	13.62	20	
15/10/19	22/10/19	21/11/19	7.76	0.095	0.067	12.87	50	
22/10/19	29/10/19	21/11/19	7.70	0.089	0.090	14.88	48	

EPA Point No. 1	Received	Accessible	pH	AI			BOD	SS
	from laboratory	on Council website		AI	Rockvale Crossing	mg/L		
Measure			1-14	mg/L			mg/L	mg/L
Sampling date								
29/10/19	04/11/19	21/11/19	7.62	0.094	0.099	7.95	120	
04/11/19	11/11/19	21/11/19	7.70	0.087	0.085	8.79	260	
11/11/19	19/11/19	21/11/19	7.80	0.089	0.075	19.80	40	
19/11/19	26/11/19	05/02/20	7.68	0.092	0.099	15.33	160	
26/11/19	02/12/19	05/02/20	7.38	0.089	0.102	6.18	200	
02/12/19	10/12/19	05/02/20	7.90	0.102	0.112	3.84	20	
10/12/19	17/12/19	05/02/20	7.90	0.084	0.089	3.63	15	
17/12/19	24/12/19	05/02/20	7.90	0.085	0.093	22.11	30	
24/12/19	07/01/20	05/02/20	7.82	0.064	0.079	20.37	40	
07/01/20	13/01/20	05/02/20	7.61	0.071	0.084	23.73	60	
13/01/20	22/01/20	05/02/20	7.49	0.062	0.079	3.90	5	
22/01/20	28/01/20	05/02/20	7.60	0.039	0.048	9.78	5	
28/01/20	03/02/20	05/02/20	8.20	0.049	0.057	4.77	48	
03/02/20	11/02/20	05/02/20	8.06	0.067	0.088	11.76	23	
11/02/20	18/02/20	26/03/20	7.39	0.077	0.089	9.78	5	
18/02/20	25/02/20	26/03/20	7.43	0.079	0.086	12.42	7	
25/02/20	03/03/20	26/03/20	7.68	0.077	0.093	4.38	13	
03/03/20	10/03/20	26/03/20	7.56	0.079	0.087	2.82	200	
10/03/20	17/03/20	06/05/20	7.80	0.068	0.087	9.60	10	
17/03/20	24/03/20	06/05/20	7.83	0.073	0.099	3.98	5	
24/03/20	30/03/20	06/05/20	7.74	0.086	0.102	3.54	67	
30/03/20	06/04/20	06/05/20	7.82	0.069	0.087	4.56	160	
06/04/20	14/04/20	06/05/20	7.86	0.077	0.096	3.75	120	
14/04/20	20/04/20	06/05/20	7.45	0.089	0.102	5.16	175	

Table 16: Discharge volumes Year 2020 for EPA Point No.1 from electronic daily backwash flow measurements) Frequency of measurement required by licence is daily, and the daily limit is 2,000 kL.

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
Jan 2020	8173	55	264	571	05/02/2020
Feb 2020	8324	74	287	573	26/03/2020
Mar 2020	10630	100	343	600	06/05/2020
April 2020	10148	170	338	500	06/05/2020
May 2020	9047	160	292	410	21/07/2020
June 2020	9872	125	329	540	21/07/2020

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
July 2020	10237	140	330	463	14/09/2020
Aug 2020	9620	81	310	450	14/09/2020
Sept 2020	8544	156	285	440	19/11/2020
Oct 2020	9383	140	303	510	19/11/2020
Nov 2020					
Dec 2020					

Table 17: Discharge water quality EPA Point No. 1 +, Year 2020 & 2021

EPA Point No. 1	Received	Accessible	pH	AI			BOD	SS
	from laboratory	on Council website		AI	Rockvale Crossing	mg/L		
Measure			1-14	mg/L			mg/L	mg/L
Sampling date								
20/04/20	28/04/20	06/05/20	7.67	0.093	0.106	8.34	100	
28/04/20	05/05/20	06/05/20	8.20	0.102	0.118	2.16	5	
05/05/20	12/05/20	21/07/20	7.82	0.095	0.097	4.71	220	
12/05/20	19/05/20	21/07/20	7.78	0.078	0.083	9.33	200	
19/05/20	26/05/20	21/07/20	7.48	0.047	0.059	4.08	225	
26/05/20	01/06/20	21/07/20	7.97	0.035	0.048	3.21	160	
01/06/20	09/06/20	21/07/20	7.90	0.047	0.053	2.85	125	
09/06/20	15/06/20	21/07/20	7.96	0.049	0.057	4.68	267	
15/06/20	22/06/20	21/07/20	8.05	0.037	0.042	3.24	5	
22/06/20	29/06/20	21/07/20	7.85	0.090	0.112	2.49	80	
29/06/20	07/07/20	21/07/20	8.10	0.079	0.089	6.12	125	
07/07/20	13/07/20	21/07/20	8.06	0.67	0.079	7.77	300	
13/07/20	20/07/20	21/07/20	8.19	0.023	0.140	3.90	5	
20/07/20	27/07/20	21/07/20	7.91	0.060	0.015	2.94	5	
27/07/20	03/08/20	14/09/20	8.09	0.073	0.042	2.37	5	
03/08/20	10/08/20	14/09/20	7.63	0.036	0.048	5.52	160	
10/08/20	17/08/20	14/09/20	7.86	0.037	0.048	3.54	5	
17/08/20	24/08/20	14/09/20	7.91	0.035	0.200	2.01	2	
24/08/20	31/08/20	14/09/20	7.87	0.047	0.126	2.91	67	
31/08/20	07/09/20	14/09/20	7.69	0.036	0.129	12.39	50	
07/09/20	14/09/20	19/11/20	7.59	0.056	0.079	8.22	85	
14/09/20	21/09/20	19/11/20	7.59	0.046	0.102	11.16	57	
21/09/20	28/09/20	19/11/20	7.48	0.057	0.103	16.11	80	

EPA Point No. 1	Received	Accessible	pH	AI			BOD	SS
	from laboratory	on Council website		AI	Rockvale Crossing	mg/L		
Measure			1-14	mg/L			mg/L	mg/L
Sampling date								
28/09/20	06/10/20	19/11/20	7.47	0.067	0.122	11.25	120	
06/10/20	12/10/20	19/11/20	7.48	0.089	0.122	7.02	80	
12/10/20	19/10/20	19/11/20	7.43	0.092	0.133	9.81	100	
19/10/20	26/10/20	19/11/20	7.74	0.087	0.102	7.98	75	
26/10/20	02/11/20	19/11/20	7.72	0.099	0.137	9.69	250	
02/11/20	09/11/20	19/11/20	7.59	0.102	0.147	5.04	280	

Table 17: Discharge volumes Year 2021 for EPA Point No.1 from electronic daily backwash flow measurements) Frequency of measurement required by licence is daily, and the daily limit is 2,000 kL.

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
Jan 2021					
Feb 2021					
Mar 2021					
April 2021					
May 2021					
June 2021					

Reporting month	Month's Total	Lowest daily volume	Mean daily volume	Greatest daily volume _x	Accessible on Council website
	kL	kL/day	kL/day	kL/day	
July 2021					
Aug 2021					
Sept 2021					
Oct 2021					
Nov 2021					
Dec 2021					