

Taronga Zoo holds an Environment Protection Licence (EPL #: 1677) to discharge water into Sydney Harbour. This licence is issued under the Protection of the Environment Operations Act 1997 (POEO Act).

In accordance with section 66(6) of the Act, Taronga is required to publish pollution monitoring results. The intention of this requirement is to improve the general public's access to information about the environmental performance of licensed facilities.



EPL number	1677
Licensee	ZOOLOGICAL PARKS BOARD OF NSW (trading as Taronga Conservation Society Australia)
Site	Taronga Zoo
Premises address	Bradleys Head Road, Mosman, NSW 2088
Activity	Taronga Water Recycling Plant (EPL Monitoring Point 4) Great Southern Oceans Exhibit (EPL Monitoring Point 2)
Web link	Taronga EPL 1677 details on NSW EPA Public Register Note for Internet Explorer 10 users: Some functionality on this website is currently not compatible with Internet Explorer 10. If you find that functionality on this website is unresponsive, you can try running your browser in compatibility mode: Open Internet Explorer 10 Press 'ALT' key on your keyboard to bring up the top menu. Then, go to Tools > Developer Tools. This will bring up the IE developer tools menu. Select IE9 or IE8 from this menu.

Date sampled	20 March 2012				
Data obtained by Licensee	4 April 2012				
Results Published	4 July 2012				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.1	-	-
		TSS	<3	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.8	6.5-8.5	-
		TSS	4	20	mg/L
		BOD	<2	15	mg/L

Date sampled	17 April 2012				
Data obtained by Licensee	2 May 2012				
Results Published	4 July 2012				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.1	-	-
		TSS	4	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.7	6.5-8.5	-
		TSS	4	20	mg/L
		BOD	<2	15	mg/L

Date sampled	13 May 2012				
Data obtained by Licensee	30 May 2012				
Results Published	4 July 2012				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.8	-	-
		TSS	<3	50	mg/L
		BOD	<4	20	mg/L
4	Monthly frequency	pH	7.7	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	<4	15	mg/L

Date sampled	7 June 2012				
Data obtained by Licensee	19 June 2012				
Results Published	4 July 2012				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.9	-	-
		TSS	<2	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.7	6.5-8.5	-
		TSS	11	20	mg/L
		BOD	4	15	mg/L

Date sampled	25 July 2012				
Data obtained by Licensee	3 August 2012				
Results Published	13 August 2012				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	3	50	mg/L
		BOD	4	20	mg/L
4	Monthly frequency	pH	7.5	6.5-8.5	-
		TSS	12	20	mg/L
		BOD	3	15	mg/L

Date sampled	16 August 2012				
Data obtained by Licensee	28 August 2012				
Results Published	27 September 2012				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.9	-	-
		TSS	3	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.3	6.5-8.5	-
		TSS	14	20	mg/L
		BOD	4	15	mg/L

Date sampled	6 September 2012				
Data obtained by Licensee	14 September 2012				
Results Published	27 September 2012				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.1	-	-
		TSS	8	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.6	6.5-8.5	-
		TSS	<3	20	mg/L
		BOD	8	15	mg/L

Date sampled	12 October 2012				
Data obtained by Licensee	19 October 2012				
Results Published	23 October 2012				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.9	-	-
		TSS	4	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.6	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	3	15	mg/L

Date sampled	14 November 2012				
Data obtained by Licensee	28 November 2012				
Results Published	4 December 2012				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	4	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.6	6.5-8.5	-
		TSS	5	20	mg/L
		BOD	<2	15	mg/L

Date sampled	6 December 2012				
Data obtained by Licensee	18 December 2012				
Results Published	20 December 2012				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.1	-	-
		TSS	4	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.8	6.5-8.5	-
		TSS	6	20	mg/L
		BOD	<2	15	mg/L

Date sampled	11 January 2013				
Data obtained by Licensee	22 January 2013				
Results Published	4 February 2013				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.1	-	-
		TSS	20	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.8	6.5-8.5	-
		TSS	<3	20	mg/L
		BOD	<2	15	mg/L

Date sampled	7 February 2013				
Data obtained by Licensee	18 February 2013				
Results Published	20 February 2013				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	34	50	mg/L
		BOD	4	20	mg/L
4	Monthly frequency	pH	7.4	6.5-8.5	-
		TSS	4	20	mg/L
		BOD	<2	15	mg/L

Date sampled	31 March 2013				
Data obtained by Licensee	3 April 2013				
Results Published	17 May 2013				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.8	-	-
		TSS	75	50	mg/L
		BOD	3	20	mg/L
4	Monthly frequency	pH	7.6	6.5-8.5	-
		TSS	6	20	mg/L
		BOD	5	15	mg/L

Date sampled	24 April 2013				
Data obtained by Licensee	3 May 2013				
Results Published	17 May 2013				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.9	-	-
		TSS	37	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.6	6.5-8.5	-
		TSS	6	20	mg/L
		BOD	5	15	mg/L

Date sampled	10 May 2013				
Data obtained by Licensee	16 May 2013				
Results Published	17 May 2013				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.9	-	-
		TSS	42	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.9	6.5-8.5	-
		TSS	39* LRE	20	mg/L
		BOD	<2	15	mg/L

Date sampled	17 June				
Data obtained by Licensee	27 June 2013				
Results Published	9 July 2013				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.9	-	-
		TSS	17	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.6	6.5-8.5	-
		TSS	4	20	mg/L
		BOD	<2	15	mg/L

Date sampled	26 July				
Data obtained by Licensee	16 August 2013				
Results Published	2 Sept 2013				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.9	-	-
		TSS	10	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.7	6.5-8.5	-
		TSS	<2	20	mg/L
		BOD	<2	15	mg/L

Date sampled	21 Aug 2013				
Data obtained by Licensee	2 Sept 2013				
Results Published	9 Sept 2013				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.9	-	-
		TSS	5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.6	6.5-8.5	-
		TSS	5	20	mg/L
		BOD	3	15	mg/L

Date sampled	12 Sept 2013				
Data obtained by Licensee	23 Sept 2013				
Results Published					
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.1	-	-
		TSS	4	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.5	6.5-8.5	-
		TSS	5	20	mg/L
		BOD	11	15	mg/L

Date sampled	24 October 2013				
Data obtained by Licensee	1 November 2013				
Results Published					
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.1	-	-
		TSS	<2	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.7	6.5-8.5	-
		TSS	<2	20	mg/L
		BOD	<2	15	mg/L

Date sampled	29 November 2013				
Data obtained by Licensee	9 December 2013				
Results Published					
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.1	-	-
		TSS	<2	50	mg/L
		BOD	3	20	mg/L
4	Monthly frequency	pH	7.8	6.5-8.5	-
		TSS	<2	20	mg/L
		BOD	<2	15	mg/L

Date sampled	16 December 2013				
Data obtained by Licensee	30 December 2013				
Results Published					
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	<2	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.6	6.5-8.5	-
		TSS	<2	20	mg/L
		BOD	<2	15	mg/L

Date sampled	9 January 2014				
Data obtained by Licensee	17 January 2014				
Results Published					
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.6	-	-
		TSS	3	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	8.1	6.5-8.5	-
		TSS	4	20	mg/L
		BOD	<2	15	mg/L

Date sampled	7 February 2014				
Data obtained by Licensee	18 February 2014				
Results Published					
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.1	-	-
		TSS	4	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.5	6.5-8.5	-
		TSS	<2	20	mg/L
		BOD	<2	15	mg/L

Date sampled	14 March 2014				
Data obtained by Licensee	21 March 2014				
Results Published	23 March 2014				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.1	-	-
		TSS	<2	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.3	6.5-8.5	-
		TSS	<2	20	mg/L
		BOD	4	3	mg/L

Date sampled	3 April				
Data obtained by Licensee	20 May				
Results Published	23 May				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	6	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.6	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	<2	15	mg/L

Date sampled	9 May 2014				
Data obtained by Licensee	21 May 2014				
Results Published	23 May 2014				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	4	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.4	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	<2	15	mg/L

Date sampled	5 June 2014				
Data obtained by Licensee	17 June 2014				
Results Published	23 June 2014				

Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	5	50	mg/L
		BOD	4	20	mg/L
4	Monthly frequency	pH	7.6	6.5-8.5	-
		TSS	13	20	mg/L
		BOD	<2	15	mg/L

Date sampled	11 July 2014				
Data obtained by Licensee	20 July 2014				
Results Published	28 July 2014				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	4	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.5	6.5-8.5	-
		TSS	6	20	mg/L
		BOD	5	15	mg/L

Date sampled	7 August 2014				
Data obtained by Licensee	19 August 2014				
Results Published	22 August 2014				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.1	-	-
		TSS	<2	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.4	6.5-8.5	-
		TSS	6	20	mg/L
		BOD	22	15	mg/L

Date sampled	18 September 2014				
Data obtained by Licensee	26 September 2014				
Results Published	26 September 2014				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	<2	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.3	6.5-8.5	-
		TSS	2	20	mg/L
		BOD	<2	15	mg/L

Date sampled	9 October 2014				
Data obtained by Licensee	22 October 2014				
Results Published	27 October 2014				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	<2	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.4	6.5-8.5	-
		TSS	2	20	mg/L
		BOD	<2	15	mg/L

Date sampled	13 November 2014				
Data obtained by Licensee	25 November 2014				
Results Published	28 November 2014				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.1	-	-
		TSS	4	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.6	6.5-8.5	-
		TSS	<2	20	mg/L
		BOD	4	15	mg/L

Date sampled	5 th December 2014				
Data obtained by Licensee	16 th December 2014				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.9	-	-
		TSS	7	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.4	6.5-8.5	-
		TSS	9	20	mg/L
		BOD	5	15	mg/L

Date sampled	22 January 2015				
Data obtained by Licensee	22 January 2015				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.9	-	-
		TSS	11	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.3	6.5-8.5	-
		TSS	<2	20	mg/L
		BOD	3	15	mg/L

Date sampled	12 March 2015				
Data obtained by Licensee	20 March 2015				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	10	50	mg/L
		BOD	3	20	mg/L
4	Monthly frequency	pH	7.7	6.5-8.5	-
		TSS	<2	20	mg/L
		BOD	4	15	mg/L

Date sampled	27 March 2015				
Data obtained by Licensee	2 April 2015				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	3	50	mg/L
		BOD	2	20	mg/L
4	Monthly frequency	pH	7.6	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	7	15	mg/L

Date sampled	16 April 2015				
Data obtained by Licensee	24 April 2015				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.9	-	-
		TSS	4	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.5	6.5-8.5	-
		TSS	3	20	mg/L
		BOD	<2	15	mg/L

Date sampled	15 May 2015				
Data obtained by Licensee	25 May 2015				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	8	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.8	6.5-8.5	-
		TSS	3	20	mg/L
		BOD	<2	15	mg/L

Date sampled	15 May 2015				
Data obtained by Licensee	25 May 2015				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	8	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.8	6.5-8.5	-
		TSS	3	20	mg/L
		BOD	<2	15	mg/L

Date sampled	4 June 2015				
Data obtained by Licensee	11 June 2015				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.6	6.5-8.5	-
		TSS	12	20	mg/L
		BOD	<2	15	mg/L

Date sampled	21 July 2015				
Data obtained by Licensee	28 July 2015				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.3	6.5-8.5	-
		TSS	9	20	mg/L
		BOD	<2	15	mg/L
		*Enterococci	<2	40	CFU/100mL
*Note: EPA Licence variation includes new water quality indicator for Point 4					

Date sampled	6 August 2015				
Data obtained by Licensee	14 August 2015				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	-	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.9	6.5-8.5	-
		TSS	5	20	mg/L
		BOD	<1	15	mg/L
		*Enterococci	<1	40	CFU/100mL
*Note: EPA Licence variation includes new water quality indicator for Point 4					

Date sampled	7 September 2015				
Data obtained by Licensee	15 September 2015				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.8	-	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.8	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	<2	15	mg/L
		*Enterococci	<1	40	CFU/100mL
*Note: EPA Licence variation includes new water quality indicator for Point 4					

Date sampled	16 October 2015				
Data obtained by Licensee	26 October 2015				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.08	-	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	No sample	6.5-8.5	-
		TSS	No sample	20	mg/L
		BOD	No sample	15	mg/L
		*Enterococci	No sample	40	CFU/100mL
*Note: EPA Licence variation includes new water quality indicator for Point 4					

Date sampled	13 November 2015				
Data obtained by Licensee	20 November 2015				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.89	-	-
		TSS	<2	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.80	6.5-8.5	-
		TSS	<5	20	mg/L
		BOD	4	15	mg/L
		*Enterococci	9	40	CFU/100mL
*Note: EPA Licence variation includes new water quality indicator for Point 4					

Date sampled	11 December 2015				
Data obtained by Licensee	18 December 2015				

Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.09	-	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.89	6.5-8.5	-
		TSS	19	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	23	40	CFU/100mL
Note: EPA Licence variation includes new water quality indicator for Point 4 (Enterococci)					

Date sampled	22 January 2016				
Data obtained by Licensee	1 February 2016				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.99	-	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.86	6.5-8.5	-
		TSS	<5	20	mg/L
		BOD	4	15	mg/L
		Enterococci	320	40	CFU/100mL

Date sampled	19 February 2016				
Data obtained by Licensee	26 February 2016				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.02	-	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.91	6.5-8.5	-
		TSS	6	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	29 March 2016				
Data obtained by Licensee	5 April 2016				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.12	-	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.92	6.5-8.5	-
		TSS	<5	20	mg/L

		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	18 April 2016				
Data obtained by Licensee	27 April 2016				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.06	-	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.86	6.5-8.5	-
		TSS	13	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	16 May 2016				
Data obtained by Licensee	24 May 2016				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.97	-	-
		TSS	28	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.67	6.5-8.5	-
		TSS	10	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	22 June 2016				
Data obtained by Licensee	27 June 2016				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.23	-	-
		TSS	6	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.50	6.5-8.5	-
		TSS	6	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	18 July 2016				
Data obtained by Licensee	25 July 2016				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.85	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.73	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	15 August 2016				
Data obtained by Licensee	22 August 2016				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.1	6.5-8.5	-
		TSS	9	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.68	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	12 September 2016				
Data obtained by Licensee	20 September 2016				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.98	6.5-8.5	-
		TSS	23	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	8.07	6.5-8.5	-
		TSS	7	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	28 October 2016				
Data obtained by Licensee	3 November 2016				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.10	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.64	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	15 December 2016				
Data obtained by Licensee	20 December 2016				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.06	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.86	6.5-8.5	-
		TSS	13	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	19 January 2017				
Data obtained by Licensee	27 January 2017				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.20	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.64	6.5-8.5	-
		TSS	<5	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	13 February 2017				
Data obtained by Licensee	22 February 2017				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly	pH	7.82	6.5-8.5	-

4	frequency	TSS	16	50	mg/L
		BOD	<2	20	mg/L
	Monthly frequency	pH	7.71	6.5-8.5	-
		TSS	<5	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	14 March 2017				
Data obtained by Licensee	21 March 2017				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.02	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.60	6.5-8.5	-
		TSS	<5	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	14 April 2017				
Data obtained by Licensee	21 April 2017				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.25	6.5-8.5	-
		TSS	5	50	mg/L
		BOD	2	20	mg/L
4	Monthly frequency	pH	7.88	6.5-8.5	-
		TSS	14	20	mg/L
		BOD	2	15	mg/L
		Enterococci	1	40	CFU/100mL

Date sampled	16 May 2017				
Data obtained by Licensee	23 May 2017				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.2	6.5-8.5	-
		TSS	5	50	mg/L
		BOD	2	20	mg/L
4	Monthly frequency	pH	7.54	6.5-8.5	-
		TSS	10	20	mg/L
		BOD	8	15	mg/L
		Enterococci	1	40	CFU/100mL

Date sampled	19 June 2017				
Data obtained by Licensee	26 June 2017				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.1	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.9	6.5-8.5	-
		TSS	7	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	10 July 2017				
Data obtained by Licensee	17 July 2017				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.08	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	2	20	mg/L
4	Monthly frequency	pH	7.63	6.5-8.5	-
		TSS	15	20	mg/L
		BOD	4	15	mg/L
		Enterococci	1	40	CFU/100mL

Date sampled	18 August 2017				
Data obtained by Licensee	25 August 2017				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.98	6.5-8.5	-
		TSS	5	50	mg/L
		BOD	2	20	mg/L
4	Monthly frequency	pH	7.73	6.5-8.5	-
		TSS	5	20	mg/L
		BOD	<5	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	18 September 2017				
Data obtained by Licensee	25 September 2017				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit

2	Monthly frequency	pH	7.95	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	2	20	mg/L
4	Monthly frequency	pH	7.53	6.5-8.5	-
		TSS	14	20	mg/L
		BOD	<5	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	20 October 2017				
Data obtained by Licensee	26 October 2017				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.78	6.5-8.5	-
		TSS	16	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.76	6.5-8.5	-
		TSS	9	20	mg/L
		BOD	8	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	27 November 2017				
Data obtained by Licensee	04 December 2017				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.89	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	5	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	20 December 2017				
Data obtained by Licensee	03 January 2018				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.08	6.5-8.5	-
		TSS	41	50	mg/L
		BOD	2	20	mg/L
4	Monthly frequency	pH	7.99	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	10	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	11 January 2018				
Data obtained by Licensee	18 January 2018				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.85	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.72	6.5-8.5	-
		TSS	<5	20	mg/L
		BOD	5	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	20 February 2018				
Data obtained by Licensee	26 February 2018				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.14	6.5-8.5	-
		TSS	43	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.76	6.5-8.5	-
		TSS	15	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	14 March 2018				
Data obtained by Licensee	21 March 2018				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	<i>No water flow during testing period</i>	6.5-8.5	-
		TSS		50	mg/L
		BOD		20	mg/L
4	Monthly frequency	pH	7.92	6.5-8.5	-
		TSS	21	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	17 April 2018				
Data obtained by Licensee	23 April 2018				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.97	6.5-8.5	-
		TSS	18	50	mg/L

		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.93	6.5-8.5	-
		TSS	13	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	21 May 2018				
Data obtained by Licensee	28 May 2018				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.04	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.85	6.5-8.5	-
		TSS	<5	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	27 June 2018 – Monitoring Point 4			10 July 2018 – Monitoring Point 2	
Data obtained by Licensee	04 July 2018 – Monitoring Point 4			17 July 2018 – Monitoring Point 2	
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.05	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.75	6.5-8.5	-
		TSS	<15	20	mg/L
		BOD	563	15	mg/L
		Enterococci	<1	40	CFU/100mL
*Samples had to be taken on separate dates					

Date sampled	19 July 2018				
Data obtained by Licensee	25 July 2018				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.04	6.5-8.5	-
		TSS	13	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.74	6.5-8.5	-
		TSS	<8	20	mg/L
		BOD	<12	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	21 August 2018				
Data obtained by Licensee	27 August 2018				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.85	6.5-8.5	-
		TSS	7	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.54	6.5-8.5	-
		TSS	11	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	11 September 2018				
Data obtained by Licensee	18 September 2018				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.95	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.44	6.5-8.5	-
		TSS	5	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	31 October 2018				
Data obtained by Licensee	07 November 2018				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.04	6.5-8.5	-
		TSS	43	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.89	6.5-8.5	-
		TSS	130	20	mg/L
		BOD	4	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	21 November 2018				
Data obtained by Licensee	28 November 2018				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit

2	Monthly frequency	pH	8.15	6.5-8.5	-
		TSS	11	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.84	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	3	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	05 December 2018				
Data obtained by Licensee	12 December 2018				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.13	6.5-8.5	-
		TSS	10	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.86	6.5-8.5	-
		TSS	9	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	23 January 2019				
Data obtained by Licensee	31 January 2019				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.02	6.5-8.5	-
		TSS	20	50	mg/L
		BOD	2	20	mg/L
4	Monthly frequency	pH	8.05	6.5-8.5	-
		TSS	11	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	13 February 2019				
Data obtained by Licensee	04 March 2019				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.94	6.5-8.5	-
		TSS	23	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.84	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	14 March 2019				
Data obtained by Licensee	21 March 2019				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.08	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	8.02	6.5-8.5	-
		TSS	9	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	14 April 2019				
Data obtained by Licensee	15 May 2019 – results were sent to incorrect recipient				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.91	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.91	6.5-8.5	-
		TSS	11	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	3	40	CFU/100mL

Date sampled	08 May 2019				
Data obtained by Licensee	15 May 2019				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.85	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	<i>No water flow during testing period</i>	6.5-8.5	-
		TSS		20	mg/L
		BOD		15	mg/L
		Enterococci		40	CFU/100mL

Date sampled	19 June 2019				
Data obtained by Licensee	28 June 2019				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.76	6.5-8.5	-
		TSS	<5	50	mg/L

		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.85	6.5-8.5	-
		TSS	20	20	mg/L
		BOD	13	15	mg/L
		Enterococci	130*	40	CFU/100mL

**Outflow UV sterilisation system equipment (ballasts) ceased operating on 19th June 2019. The faulty ballasts compromised the UV treatment that sterilises the overflow from the buffer tank. In the days leading up to this, there was heavy rain (33mm on 18th June). As a result, on 19th June 2019 and early 20th June 2019 undisinfected overflow water was discharged from the licence premises to Little Sirius Cove. The 2 faulty ballasts on the UV system were unable to be replaced by internal electricians, on 19th June the Asset Operations Manager called and emailed the external equipment maintenance contractor requesting repair on the ballasts. The Licensee undertook measures on 20th June 2019 to prevent any further discharge of undisinfected water. The faulty ballast issue was rectified on 25th June 2019. For all days that the outflow UV system was down (other than the 19th and 20th) the water was circulated through the normal recycled Mentec disinfection system before it went back into the Zoo.*

The EPA was notified of the incident in a timely manner, and the PIRMP was reviewed post-incident in line with statutory obligation.

Date sampled*	10 July 2019 – Monitoring Point 4			18 July 2019 – Monitoring Point 2	
Data obtained by Licensee*	18 July 2019 – Monitoring Point 4			25 July 2019 – Monitoring Point 2	
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.99	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	8.03	6.5-8.5	-
		TSS	9	20	mg/L
		BOD	2	15	mg/L
		Enterococci	<1	40	CFU/100mL
*Samples for outflow 2 were not taken on the 10 th of July due to ALS timing issues. Samples were taken separately on the 18 th of July					

Date sampled*	09 August 2019 – Monitoring Point 4			07 August 2019 – Monitoring Point 2	
Data obtained by Licensee*	16 August 2019 – Monitoring Point 4			14 August 2019 – Monitoring Point 2	
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.87	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.20	6.5-8.5	-
		TSS	14	20	mg/L
		BOD	5	15	mg/L
		Enterococci	<1	40	CFU/100mL
*Samples for outflow 4 were not taken on the 07 th of August due to Taronqa access issues. Samples					

were taken separately on the 09th of August.

Date sampled	03 September 2019 – Monitoring Point 2 & 4				
Data obtained by Licensee	19 September 2019 – Monitoring Point 2 & 4				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.62	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.79	6.5-8.5	-
		TSS	7	20	mg/L
		BOD	2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	03 October 2019 – Monitoring Point 2 & 4				
Data obtained by Licensee	11 October 2019 – Monitoring Point 2 & 4				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.5	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.6	6.5-8.5	-
		TSS	<5	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	06 November 2019 – Monitoring Point 2 & 4				
Data obtained by Licensee	12 November 2019 – Monitoring Point 2 & 4				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.91	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	8	6.5-8.5	-
		TSS	<5	20	mg/L
		BOD	3	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	04 December 2019 – Monitoring Point 2 & 4				
Data obtained by Licensee	15 January 2020 – Monitoring Point 2 & 4				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.83	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.79	6.5-8.5	-
		TSS	<5	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	09 January 2020 – Monitoring Point 2 & 4				
Data obtained by Licensee	04 February 2020 – Monitoring Point 2 & 4				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.86	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	<i>No water flow during testing period</i>	6.5-8.5	-
		TSS		20	mg/L
		BOD		15	mg/L
		Enterococci		40	CFU/100mL

Date sampled	28 February 2020 – Monitoring Point 2 & 4				
Data obtained by Licensee	10 March 2020 – Monitoring Point 2 & 4				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	8.02	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.9	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	11 March 2020 – Monitoring Point 2 & 4				
Data obtained by Licensee	18 March 2020 – Monitoring Point 2 & 4				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.87	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.9	6.5-8.5	-
		TSS	21*	20	mg/L
		BOD	3	15	mg/L
		Enterococci	<1	40	CFU/100mL
<i>* Sample taken at discharge and monitoring point 4 (water recycling plant) on 11th March 2020 measured 21 miligrams per litre of TSS. The TSS concentration limit stipulated in the licence is 20 mg per litre. When the exceedance was observed, the Water Systems Supervisor notified the Head of Assets (as per the PIRMP). Investigations found that there were no abnormalities in the process that could potentially lead to the elevated level. Because the limit was exceeded by only 5%, a possible explanation may be a sampling and/or laboratory error.</i>					

Date sampled	02 April 2020 – Monitoring Point 2 & 4				
Data obtained by Licensee	09 April 2020 – Monitoring Point 2 & 4				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.8	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.94	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	07 May 2020 – Monitoring Point 2 & 4				
Data obtained by Licensee	14 May 2020 – Monitoring Point 2 & 4				
Monitoring Point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.81	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.89	6.5-8.5	-
		TSS	9	20	mg/L
		BOD	2	15	mg/L

		Enterococci	<1	40	CFU/100mL
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Date sampled	10 June 2020 –Point 2 & 4				
Data obtained by Licensee	17 June 2020 –Point 2 & 4				
EPL monitoring point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.79	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	2	20	mg/L
4	Monthly frequency	pH	7.82	6.5-8.5	-
		TSS	18	20	mg/L
		BOD	3	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	2 July 2020 –Point 2 & 4				
Data obtained by Licensee	9 July 2020 –Point 2 & 4				
EPL monitoring point	Frequency	Pollutant	Measurement	Limit	Unit
2	Monthly frequency	pH	7.71	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly frequency	pH	7.75	6.5-8.5	-
		TSS	12	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	12 August 2020 –Point 2 & 4				
Data obtained by Licensee	21 August 2020 –Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.78	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly	pH	7.84	6.5-8.5	-
		TSS	14	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	27 August 2020 –Point 2				
Data obtained by Licensee	2 September 2020				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.93	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L

Date sampled	10 September 2020 –Point 2 & 4				
Data obtained by Licensee	17 September 2020–Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.81	6.5-8.5	-
		TSS	10	50	mg/L
		BOD	<2	20	mg/L
4	Monthly	pH	7.78	6.5-8.5	-
		TSS	15	20	mg/L
		BOD	2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	24 September 2020 –Point 2				
Data obtained by Licensee	30 September 2020 - Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.65	6.5-8.5	-
		TSS	16	50	mg/L
		BOD	2	20	mg/L

Date sampled	8 October 2020 –Point 2 & 4				
Data obtained by Licensee	15 October 2020–Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.95	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly	pH	7.87	6.5-8.5	-
		TSS	12	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	22 October 2020 –Point 2				
Data obtained by Licensee	29 th October 2020- Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.54	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L

Date sampled	5 November 2020 –Point 2 & 4				
Data obtained by Licensee	12 November 2020–Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.98	6.5-8.5	-
		TSS	9	50	mg/L
		BOD	3	20	mg/L
4	Monthly	pH	8.33	6.5-8.5	-
		TSS	15	20	mg/L
		BOD	16*	15	mg/L
		Enterococci	~1	40	CFU/100mL

**Sample taken at discharge and monitoring point 4 (water recycling plant) on 5th November 2020 measured 16 mg/L of BOD. The BOD concentration limit stipulated in the licence is 15 mg/L. Investigations have found that there were no abnormalities in the process on the 5th November that could potentially lead to the elevated level. Because the limit was only exceeded by 1 mg/L, a likely explanation may be sampling/and or analysis error.*

Date sampled	19 November 2020 –Point 2				
Data obtained by Licensee	26 November 2020- Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	6.98	6.5-8.5	-
		TSS	13	50	mg/L
		BOD	<2	20	mg/L

Date sampled	3 December 2020 –Point 2 & 4				
Data obtained by Licensee	10 December 2020–Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.83	6.5-8.5	-
		TSS	28	50	mg/L
		BOD	<2	20	mg/L
4	Monthly	pH	7.87	6.5-8.5	-
		TSS	8	20	mg/L

		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	17 December 2020 –Point 2				
Data obtained by Licensee	24 December 2020- Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.80	6.5-8.5	-
		TSS	12	50	mg/L
		BOD	<2	20	mg/L

Date sampled	7 th January 2021 –Point 2 & 4				
Data obtained by Licensee	13 th January 2021–Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.94	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly	pH	7.62	6.5-8.5	-
		TSS	14	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	21 st January 2021 –Point 2				
Data obtained by Licensee	28 th January 2021- Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.89	6.5-8.5	-
		TSS	17	50	mg/L
		BOD	<2	20	mg/L

Date sampled	4 th Feb 2021 –Point 2 & 4				
Data obtained by Licensee	11 th Feb 2021–Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.68	6.5-8.5	-
		TSS	6	50	mg/L
		BOD	<2	20	mg/L
4	Monthly	pH	6.87	6.5-8.5	-
		TSS	7	20	mg/L
		BOD	<2	15	mg/L

		Enterococci	<1	40	CFU/100mL
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Date sampled	18 February 2021 –Point 2				
Data obtained by Licensee	25 February 2021- Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.73	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L

Date sampled	4 th March 2021 –Point 2 & 4				
Data obtained by Licensee	16 th March 2021–Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.74	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly	pH	7.93	6.5-8.5	-
		TSS	10	20	mg/L
		BOD	3	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	18 March 2021 –Point 2				
Data obtained by Licensee	25 March 2021- Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.74	6.5-8.5	-
		TSS	8	50	mg/L
		BOD	2	20	mg/L

Date sampled	1 st April 2021 –Point 2 & 4				
Data obtained by Licensee	9 th April 2021–Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.88	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly	pH	7.92	6.5-8.5	-
		TSS	<5	20	mg/L
		BOD	2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	15 th April 2021 – Point 2				
Data obtained by Licensee	22 nd April 2021- Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	8.07	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L

Date sampled	29 th Apr 2021 – Point 2 & 4				
Data obtained by Licensee	7 th May 2021– Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.84	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly	pH	7.59	6.5-8.5	-
		TSS	<5	20	mg/L
		BOD	11	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	13 May 2021 –Point 2				
Data obtained by Licensee	20 May 2021- Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.73	6.5-8.5	-
		TSS	26	50	mg/L
		BOD	3	20	mg/L

Date sampled	26 May 2021 –Point 2				
Data obtained by Licensee	2 June 2021- Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.98	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	5	20	mg/L

Date sampled	15 th June 2021 – Point 2 & 4				
Data obtained by Licensee	22 nd June 2021– Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit

2	Fortnightly	pH	7.78	6.5-8.5	-
		TSS	14	50	mg/L
		BOD	<2	20	mg/L
4	Monthly	pH	7.83	6.5-8.5	-
		TSS	13	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	29 th June 2021 - Point 2				
Data obtained by Licensee	7 th July 2021 - Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.58	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L

Date sampled	13 th July 2021 – Point 2 & 4				
Data obtained by Licensee	20 th July 2021– Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.76	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
4	Monthly	pH	7.76	6.5-8.5	-
		TSS	10	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	27 th July 2021 - Point 2				
Data obtained by Licensee	3 rd Aug 2021 - Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.89	6.5-8.5	-
		TSS	6	50	mg/L
		BOD	<2	20	mg/L

Date sampled	10 Aug 2021- Point 2				
Data obtained by Licensee	17 Aug 2021- Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	6.9	6.5-8.5	-

		TSS	<5	50	mg/L
		BOD	<2	20	mg/L
Point 4 samples were cancelled because the WWTP was switched-off for cleaning. Samples will be conducted at WWTP in mid to late August.					

Date sampled	24 th Aug 2021 – Point 2 & 4				
Data obtained by Licensee	30 th August 2021– Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.30	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	3	20	mg/L
4	Monthly	pH	6.56	6.5-8.5	-
		TSS	36*	20	mg/L
		BOD	4	15	mg/L
		Enterococci	<1	40	CFU/100mL
*The likely cause of TSS exceedance was heavy rain (30+mm) and water flow through the system increasing significantly. The clarifier had just been restarted from a major clean, and probably the increase of the flow induced wash out of some sludge remains.					

Date sampled	7 th Sep 2021 – Point 2				
Data obtained by Licensee	14 th Sep 2021 - Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.95	6.5-8.5	-
		TSS	20	50	mg/L
		BOD	<2	20	mg/L

Date sampled	21 st Sep 2021 – Point 2 & 4				
Data obtained by Licensee	28 th Sep 2021– Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	8.01	6.5-8.5	-
		TSS	36	50	mg/L
		BOD	<2	20	mg/L
4	Monthly	pH	7.77	6.5-8.5	-
		TSS	<5	20	mg/L
		BOD	2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	5 th Oct 2021 – Point 2				
Data obtained	11 th Sep 2021 - Point 2				

by Licensee					
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	6.79	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L

Date sampled	19 th Oct 2021 – Point 2 & 4				
Data obtained by Licensee	26 th Oct 2021– Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.86	6.5-8.5	-
		TSS	12	50	mg/L
		BOD	2	20	mg/L
4	Monthly	pH	7.64	6.5-8.5	-
		TSS	8	20	mg/L
		BOD	<2	15	mg/L
		Enterococci	<1	40	CFU/100mL

Date sampled	2 nd Nov 2021 – Point 2				
Data obtained by Licensee	10 th Nov 2021 - Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.75	6.5-8.5	-
		TSS	<5	50	mg/L
		BOD	<2	20	mg/L

Date sampled	16 th Nov 2021 – Point 2 & 4				
Data obtained by Licensee	23 rd Nov 2021– Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	8.01	6.5-8.5	-
		TSS	8	50	mg/L
		BOD	<2	20	mg/L
4	Monthly	pH	7.95	6.5-8.5	-
		TSS	12	20	mg/L
		BOD *	32	15	mg/L
		Enterococci	<1	40	CFU/100mL

*Sample showed elevated levels of Biochemical Oxygen Demand at point 4 (Water treatment plant). The reading was 32 mg/L and the Licence stipulates a limit of 15 mg/L. On that day, other parameters like TSS and enterococci were within the limits stipulated in our Licence. There weren't any signs of water quality deteriorating on the sampling day nor on the day before. We have investigated potential causes for the elevated BOD, and believe the likely cause is that stagnant

water in 'Styx yard tanks' had an unscheduled clean and drop, and this caused high BOD at the WWTP when this water was dropped. Therefore, is considered a 'once off' incident (it is worth noting that we have not had an exceedance of BOD for several years besides one sampling error). To prevent reoccurrence, we will drain these 'Styx yard tanks' more frequently to allow water to better exchange. Because BOD correlates with TSS, we are ensuring that TSS is in normal range, for example by checking UV intensity parameters at the discharge Point 4 UV system. In terms of our WWTP equipment, all systems are running as normal and no faults have been reported.

Date sampled	30th Nov 2021 – Point 2				
Data obtained by Licensee	7 th Dec 2021 - Point 2				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	7.66	6.5-8.5	-
		TSS	9	50	mg/L
		BOD	2	20	mg/L

Date sampled	14 th Dec 2021 – Point 2 & 4				
Data obtained by Licensee	22 nd Dec 2021– Point 2 & 4				
EPL monitoring point	Required monitoring frequency	Pollutant	Measurement	Limit	Unit
2	Fortnightly	pH	8.17	6.5-8.5	-
		TSS	19	50	mg/L
		BOD	<2	20	mg/L
4	Monthly	pH	7.96	6.5-8.5	-
		TSS	13	20	mg/L
		BOD	2	15	mg/L
		Enterococci	<1	40	CFU/100mL