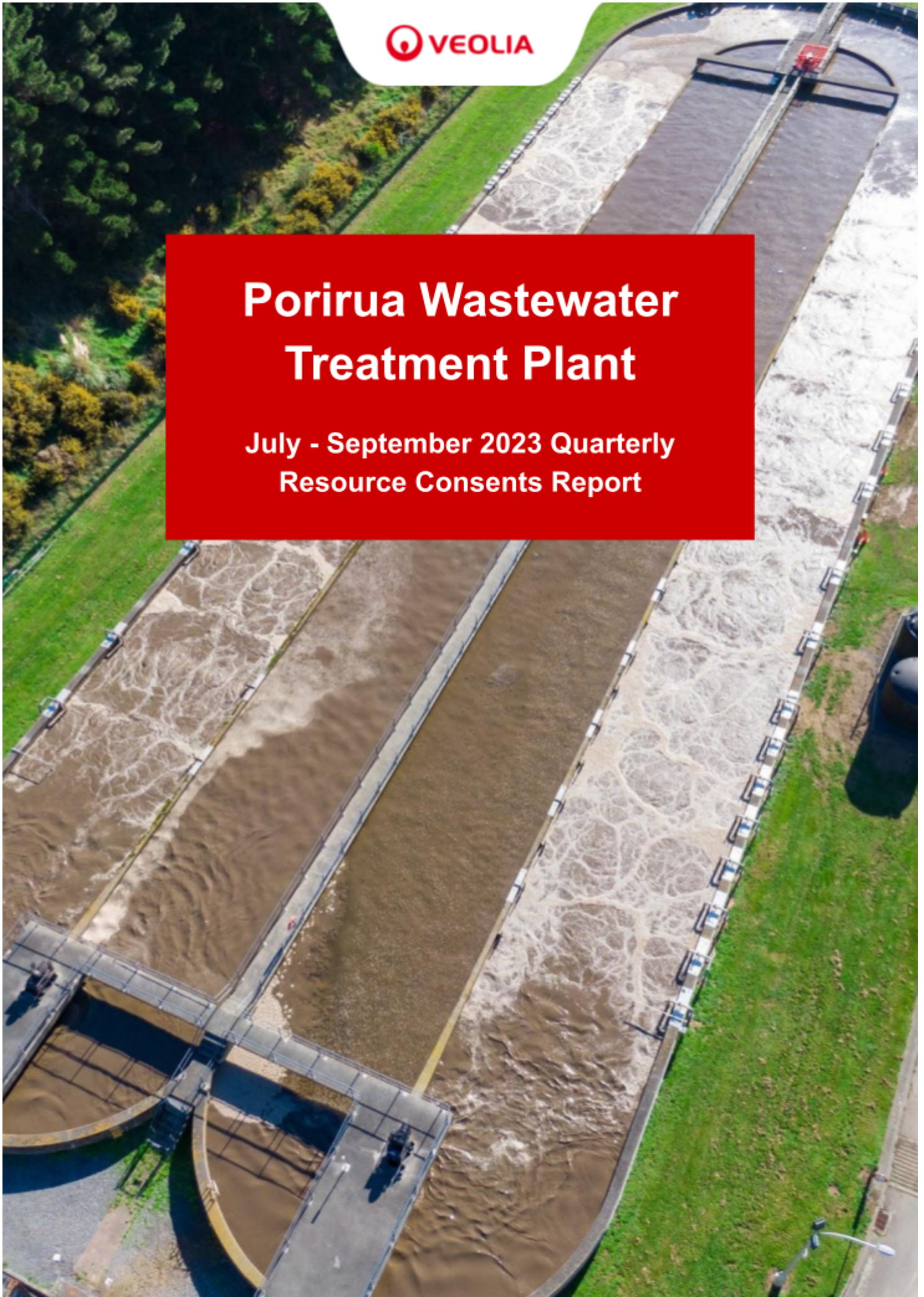




Porirua Wastewater Treatment Plant

July - September 2023 Quarterly
Resource Consents Report



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CONTROL SHEET

Document Title: Porirua Wastewater Treatment Plant July - September 2023 Quarterly Resource Consents Report

Prepared by: Veolia

Reviewed by: Wellington Water

Authorised by: Wellington Water

DOCUMENT CONTROL REGISTER

Version	Status	Date	Details of Revision
0	Draft	31/10/2023	Original version for review.
1	Final	2/11/2023	Internally reviewed.

EXECUTIVE SUMMARY

The following report was prepared by Veolia on behalf of the Porirua City Council (PCC) for the Greater Wellington Regional Council (GWRC). This report includes results and observations that satisfy the reporting requirements of the following Porirua Wastewater Treatment Plant resource consents:

WGN200229 [36816]

The Porirua WWTP is governed by the resource consent under the Greater Wellington Regional Council consent file number WGN200229. In general, the consent allows the discharge of treated effluent from the Porirua City Council's Wastewater Treatment Plant at Rukutane Point through an existing outfall at or about map reference NZMS 260:R27;320.097.

The report will cover the quarterly period from July to September 2023 as requested in this resource consent. The following is a brief overview of the compliance with the consent conditions:

Resource Consent Condition	Compliant/Non-Compliant/Not Applicable
4	Compliant
7	Compliant
8	Non-compliant
9	Compliant
9A	Non-compliant
10	Non-compliant
12	Compliant
12(A)	Compliant
12(C)	Compliant
12(D)	Compliant
14	Compliant
15	Compliant
16	Non-compliant
35A	Compliant

Table 1: WGN200229 [36816] Resource Consent Condition Compliance

WGN200229 [36727]

The Porirua WWTP is governed by the resource consent under the Greater Wellington Regional Council consent file number WGN200229 [36727]. In general, the consent allows the discharge of contaminants (odour) from the Porirua City Council's Wastewater Treatment Plant to the air at the or about map reference NZMS 260: R27;632.096. The report will cover the quarterly period from July to September 2023 as requested in this resource consent. The following is a brief overview of the compliance with the consent conditions:

Resource Consent Condition	Compliant/Non-Compliant/Not Applicable
5	Compliant
6	Compliant

Table 2: WGN200229 [36727] Resource Consent Condition Compliance

TABLE OF CONTENTS

CONTROL SHEET	1
DOCUMENT CONTROL REGISTER	1
EXECUTIVE SUMMARY	2
WGN200229 [36816]	2
WGN200229 [36727]	2
TABLE OF CONTENTS	3
WGN200229 [36816]	5
Condition (4)	5
Table 3. Daily volumes	5
Condition (7)	5
Condition (8)	6
Condition (9)	7
Condition (9A)	8
Condition (10)	9
Condition (12)	10
(i) Final Effluent Biochemical Oxygen Demand	10
(ii) Final Effluent Suspended Solids	11
Condition (12A)	12
Condition (12C)	13
Condition (12D)	14
Condition (14)	15
Te Korohiwa Rocks	15
200m West of Outfall	15
200m East of Outfall	15
Titahi Bay Beach South	16
Titahi Bay Beach	16
Mount Cooper	16
Control	16
140m generally eastwards of the outfall	17
200m generally southwestwards of the outfall	17
Titahi Bay Beach At Toms Road - Surf Club	17
Control	17
Condition (15)	18
140m generally eastwards of the outfall	18
200m generally southwestwards of the outfall	18
Titahi Bay Beach At Toms Road - Surf Club	18
Control	18
Condition (16)	19
140m Eastwards of the outfall	19
200m Southwestwards of the outfall	19
Titahi Bay Beach At Toms Road - Surf Club	20
Control	20
140m generally eastwards of the outfall	20

200m generally southwestwards of the outfall	20
Titahi Bay Beach At Toms Road - Surf Club	21
Control	21
Condition (35A)	22
WGN200229 [36727]	23
Condition 5	23
Condition 6	23

Condition (4)

4. The consent holder shall continuously monitor and record the daily volume of the inflow to and effluent from the wastewater treatment plant. The records shall be supplied to the Manager in accordance with conditions 18 and 19, and on request of the Manager.

Below are the daily volumes of the inflow to and effluent from the Porirua WWTP:

Day	July 2023		August 2023		September 2023	
	Daily Volume		Daily Volume		Daily Volume	
	Inflow m ³	Effluent m ³	Inflow m ³	Effluent m ³	Inflow m ³	Effluent m ³
1	22221	24755	34708	37042	22636	24576
2	22501	25220	34270	36546	24120	26160
3	21839	23617	29241	30605	24652	26988
4	20765	23687	24391	27711	22216	24786
5	20920	22857	24330	27594	23918	25671
6	19585	22782	25384	28312	23531	25569
7	18743	22460	22884	26199	23007	25036
8	21446	24256	29877	32172	21953	23939
9	45117	45300	25857	28043	23576	25442
10	26603	29319	35469	36890	23864	26096
11	24040	26057	28291	29950	24270	25409
12	21252	24640	26784	28877	22611	24551
13	21241	23411	30001	33248	22618	24233
14	21682	24292	26658	29246	21904	23531
15	20714	23822	27096	30068	20306	23304
16	24243	26412	72229	68111	21864	23570
17	22638	24607	36133	39825	24461	25590
18	21725	23925	26590	31157	23074	24929
19	22153	23886	46846	49542	21575	23190
20	23664	25745	38018	42561	20718	22944
21	21729	24365	40378	43105	20343	22959
22	29472	30845	31578	34122	21760	23887
23	45279	45481	27516	30457	39053	40542
24	37386	39611	25820	27299	25150	27523
25	35251	37644	23561	27143	23094	24389
26	40100	41606	25438	27173	32186	33517
27	32281	33081	26097	28237	35178	37189
28	45293	46244	24784	25202	34473	36449
29	28568	32228	23489	23466	28064	25355
30	28483	30562	23888	25736	37373	37425
31	27891	30410	22839	25411	-	-

Table 3. Daily volumes

Condition (7)

7. The consent holder shall each day, including weekends and public holidays, obtain a representative 24-hour flow-proportioned composite sample of the wastewater from the location identified in accordance with condition 6. This sample shall be analysed for total suspended solids and biochemical oxygen demand.

The results of the analysis required by Condition 7 are reported and assessed under Condition 12.

Condition (8)

8. The consent holder shall each day, including weekends and public holidays, between the hours of 9am and 5pm, obtain a representative grab sample of the wastewater from the location identified in accordance with condition 6. Prior to certification of the enterococci trigger under condition 21B this sample shall be analysed for UV transmissivity, faecal coliforms and enterococci. Following certification of the enterococci trigger under condition 21B the sample shall be analysed for enterococci and UV transmissivity.

The following is a summary of the sampling and testing required under Condition 8. Please note that the daily testing for Enterococci and UVT was not achieved during July and August 2023 since the arrangements with the external laboratory were still being undertaken. Faecal coliform compliance has been assessed under Condition 35A.

Day	July 2023			August 2023			September 2023		
	Faecal Coliforms	Enterococci	UVT	Faecal Coliforms	Enterococci	UVT	Faecal Coliforms	Enterococci	UVT
	cfu/100mL	cfu/100mL	%	cfu/100mL	cfu/100mL	%	cfu/100mL	cfu/100mL	%
1	374			548			490	4000	63.40
2	283			7071		61.80	245	10	64.20
3	100		67.5	1732			245	10	61.50
4	100			245		68.30	14	20	64.80
5	245		68.9	17			775	6000	62.60
6	894			20		64.00	35	10	66.80
7	100		67.4	10			14	10	66.70
8	10			100		62.90	14	20	66.40
9	100			100		61.90	14	30	67.90
10	100		65.0	10		63.90	14	10	65.20
11	100			10		65.50	17	10	66.60
12	100		68.9	10		66.40	22	10	65.60
13	100			17		63.90	22	10	67.80
14	100		69.0	63		63.20	22	10	67.60
15	10			10		62.50	14	10	66.50
16	28			22		62.10	303	1500	65.70
17	100		64.8	548			158	560	66.50
18	100			500		63.70	26	10	67.50
19	100		66.3	10		64.10	17	20	67.70
20	100			265		60.00	28	10	65.10
21	100		67.6	10		64.60	17	10	67.30
22	113			10		66.70	42	10	66.90
23	39			10	10	66.60	24	20	65.50
24	100		67.3	10	10	67.60	24	10	66.30
25	100			10	10	61.30	17	10	65.50
26	100		64.9	10	10	65.10	24	10	66.40
27	141			332	6000	65.00	45	10	67.90
28	100		42.2	10	10	63.80	35	10	69.00
29	10			14	10	62.10	14	40	69.60
30	10			10	10	64.60	14	10	68.10
31	100		65.90	10	10	64.60	-	-	-
Limits	2000	-	-	2000	-	-	2000	-	-

Table 4. Daily Faecal coliform, Enterococci and UVT results

Condition (9)

9. The consent holder shall on at least one occasion each month, on a normal working day, obtain a representative 24-hour flow-proportioned composite sample of the wastewater from the location identified in accordance with condition 6. This sample shall be collected on the same day as the representative receiving water samples are collected under condition 14.

This sample shall be analysed for:

- a) Nitrate Nitrogen
- b) Nitrite Nitrogen
- c) Dissolved Reactive Phosphorus
- d) Total Nitrogen
- e) Total Phosphorus
- f) Total Arsenic
- g) Total Cadmium
- h) Total Chromium
- i) Total Copper
- j) Total Nickel
- k) Total Lead
- l) Total Zinc
- m) Total Mercury
- n) Phenol

Samples have been taken in accordance with Condition 9. The results are reported and assessed in Condition 12A.

Condition (9A)

9A. The consent holder shall on at least one occasion each week, on a normal working day, obtain a representative 24-hour flow-proportioned composite sample of the wastewater from the location identified in accordance with condition 6. This sample shall be analysed for Total Ammonia Nitrogen.

The following are the results of the sampling performed under Condition 9(A). Please note that the weekly testing was not performed during July 2023 since the arrangements with the external laboratory were still being undertaken.

Day	July 2023	August 2023	September 2023
	Total Ammonia Nitrogen mg/L	Total Ammonia Nitrogen mg/L	Total Ammonia Nitrogen mg/L
1			
2			
3			
4			
5			
6			
7			0.5
8		1.16	
9			
10	2.6		
11			
12			
13			0.94
14			
15			
16		1.49	
17			
18			
19			
20			0.59
21			
22			
23			
24		0.22	
25			
26			
27			0.17
28			
29			
30		0.46	
31			
Limit	6 mg/L	6 mg/L	6 mg/L

Table 5. Weekly Total ammonia nitrogen

Total Ammonia Nitrogen weekly results did not exceed the 6 mg/L limit stated in Condition 33 during this reporting period.

Condition (10)

10. The consent holder shall:

- a. At least once a calendar month between the hours of 9am and 5pm, obtain a representative grab sample of the influent to the wastewater treatment plant.
- b. At least once a week between the hours of 9am and 5pm, obtain a representative grab sample of the wastewater from the location identified in accordance with condition 6.

These samples shall be analysed for a suitable viral indicator, such as F-RNA bacteriophage. The requirement in this condition may be varied by certified updates to the Monitoring Plan under condition 10A.

Unfortunately, due to a miscommunication between Veolia and the external laboratory, the weekly effluent viral indicator testing was delayed until the 26th of September. The monthly influent viral indicator testing was not performed during this reporting period as a result of this miscommunication. Therefore, condition 10 is non-compliant for this reporting period.

Day	July 2023		August 2023		September 2023	
	Influent Monthly grab	Effluent Weekly grab	Influent Monthly grab	Effluent Weekly grab	Influent Monthly grab	Effluent Weekly grab
	F-RNA Bacteriophage	F-RNA Bacteriophage	F-RNA Bacteriophage	F-RNA Bacteriophage	F-RNA Bacteriophage	F-RNA Bacteriophage
	PFU/l	PFU/l	PFU/l	PFU/l	PFU/l	PFU/l
26	No sample	No sample	No sample	No sample	No sample	10

Table 6. Viral indicator testing

Condition (12)

12. The quality of the wastewater sampled in accordance with condition 7 of this consent shall not exceed the following limits:
- a. Suspended solids – The geometric mean of 90 consecutive daily suspended solid values shall not exceed 30 g/m³ and no more than 10% of 90 consecutive daily values shall exceed 75 g/m³
- b. Biochemical oxygen demand –The geometric mean of 90 consecutive daily biological oxygen demand values shall not exceed 30 g/m³ and no more than 10% of 90 consecutive daily values shall exceed 75 g/m³

(i) Final Effluent Biochemical Oxygen Demand

Day	July 2023			August 2023			September 2023		
	Results	Geometric Mean	Percentile	Results	Geometric Mean	Percentile	Results	Geometric Mean	Percentile
	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³
1	10	4	7	3	4	8	4	4	7
2	4	4	7	4	4	7	4	4	7
3	4	4	7	3	4	7	3	4	7
4	5	4	7	10	4	8	5	4	7
5	5	4	7	4	4	7	5	4	7
6	4	4	7	5	4	7	3	5	7
7	4	4	7	4	4	7	41	5	8
8	3	4	7	3	4	7	4	5	8
9	4	4	7	4	4	7	6	5	8
10	3	4	6	4	4	7	6	5	8
11	3	4	6	4	4	7	5	5	8
12	5	4	6	5	4	7	5	5	8
13	12	4	6	7	4	7	5	5	8
14	11	4	7	4	4	7	4	5	8
15	5	4	7	4	4	7	6	5	8
16	4	4	7	7	4	7	5	5	7
17	4	4	7	5	4	7	3	5	7
18	4	4	7	5	4	7	5	5	7
19	4	4	7	4	4	7	4	5	7
20	5	4	7	3	4	7	9	5	7
21	22	4	8	4	4	7	5	5	7
22	18	4	8	4	4	7	6	5	7
23	6	4	8	4	4	7	6	5	7
24	6	4	8	4	4	7	5	5	7
25	4	4	8	5	4	7	5	5	7
26	4	4	8	4	4	7	5	5	7
27	3	4	8	4	4	7	4	5	7
28	5	4	8	4	4	7	3	5	7
29	4	4	8	3	4	7	3	5	6
30	3	4	8	3	4	7	4	5	6
31	5	4	8	3	4	7	-	-	-
Limits	-	30	75	-	30	75	-	30	75

Table 7: BOD₅ Geometric Mean and Percent Compliance

Please note that analytical results highlighted in amber are above the 30g/m³ geometric mean limit. Analytical results highlighted in red are above the 75g/m³ percent compliance limit.

(ii) Final Effluent Suspended Solids

Day	July 2023			August 2023			September 2023		
	Results	Geometric Mean	Percentile	Results	Geometric Mean	Percentile	Results	Geometric Mean	Percentile
	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³
1	8	6	6	6	6	6	6	6	7
2	5	6	6	6	6	6	6	6	7
3	6	6	6	6	6	6	6	6	7
4	5	6	6	7	6	6	6	6	7
5	5	6	6	7	6	6	6	6	7
6	5	6	6	10	6	7	6	6	7
7	5	6	6	6	6	7	101	6	8
8	5	6	6	6	6	7	6	6	8
9	5	6	6	6	6	7	6	6	8
10	5	6	6	6	6	7	6	6	8
11	5	6	6	6	6	7	6	6	8
12	5	6	6	11	6	7	6	6	8
13	8	6	6	6	6	7	6	6	8
14	7	6	6	6	6	7	6	6	8
15	5	6	6	6	6	7	6	6	8
16	5	6	6	6	6	7	6	6	7
17	5	6	6	6	6	7	6	6	7
18	5	6	6	8	6	7	6	6	7
19	5	6	6	6	6	7	6	6	7
20	6	6	6	6	6	7	6	6	7
21	24	6	6	6	6	7	6	6	7
22	22	6	6	10	6	8	6	6	7
23	6	6	6	6	6	8	6	6	7
24	6	6	6	6	6	8	6	6	7
25	6	6	6	5	6	8	4	6	7
26	6	6	6	5	6	8	4	6	7
27	6	6	6	5	6	8	5	6	7
28	6	6	6	5	6	8	6	6	7
29	6	6	6	6	6	7	6	6	7
30	6	6	6	6	6	7	6	6	7
31	6	6	6	6	6	7	-	-	-
Limits	-	30	75	-	30	75	-	30	75

Table 8: Suspended Solid Geometric Mean and Percent Compliance

Please note that analytical results highlighted in amber are above the 30g/m³ geometric mean limit. Analytical results highlighted in red are above the 75g/m³ percent compliance limit.

Condition (12A)

12A. Concentrations of metals and other compounds in the sample required under condition 9 shall not exceed:

Metals/metalloids and phenols

- a. Total Arsenic 0.023 g/m³
- b. Total Cadmium 0.055 g/m³
- c. Total Chromium 0.044 g/m³
- d. Total Copper 0.013 g/m³
- e. Total Nickel 0.07 g/m³
- f. Total Lead 0.044 g/m³
- g. Total Zinc 0.08 g/m³
- h. Total Mercury 0.001 g/m³
- i. Phenol 2.7 g/m³

Compound	Units	Limit	July 2023	August 2023	September 2023
Total Arsenic	g/m³	0.023	0.002	0.002	0.002
Total Cadmium	g/m³	0.055	0.00100	0.00100	0.00100
Total Chromium	g/m³	0.044	0.001	0.002	0.002
Total Copper	g/m³	0.013	0.002	0.006	0.005
Total Nickel	g/m³	0.07	0.005	0.022	0.019
Total Lead	g/m³	0.044	0.001	0.001	0.001
Total Zinc	g/m³	0.08	0.00100	0.00100	0.00100
Total Mercury	g/m³	0.001	0.00100	0.00100	0.00100
Phenol	g/m³	2.7	0.010	0.010	0.010
Nitrate Nitrogen	g/m³	-		1.76	1.28
Nitrite Nitrogen	g/m³	-		0.03	0.08
Dissolved Reactive Phosphorus	g/m³	-		1.54	2.34
Total Nitrogen	g/m³	-		3.66	2.97
Total Phosphorus	g/m³	-		2.80	2.65

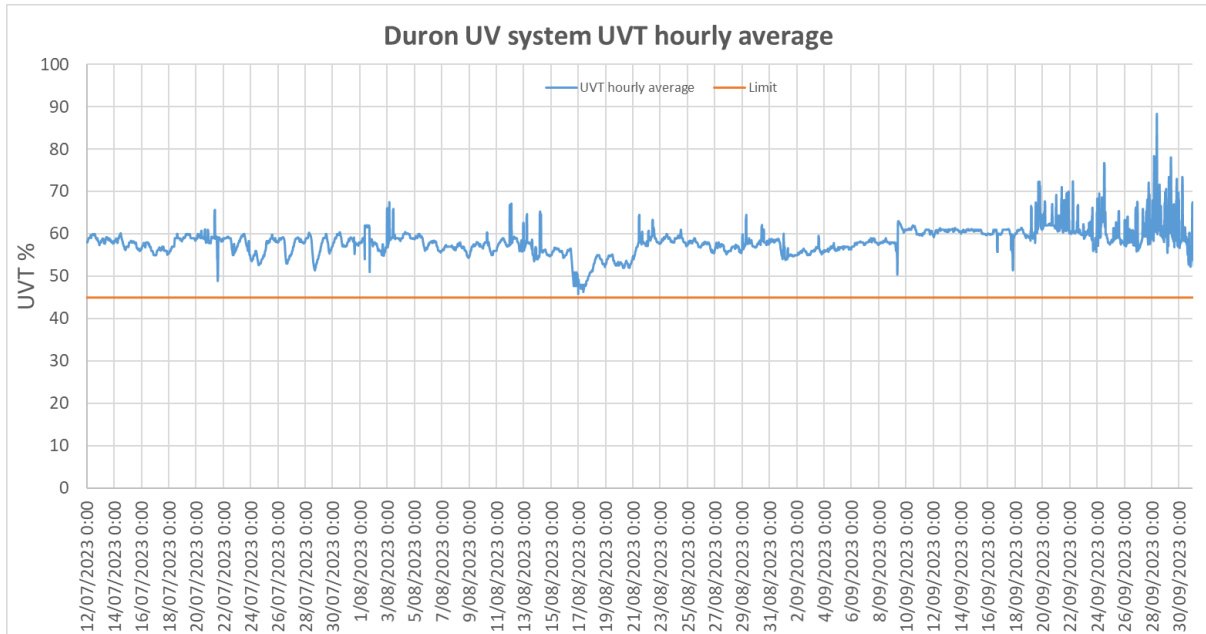
Table 9. Monthly heavy metals

Please note that the monthly 24-flow composite sample for **July 2023** was tested in accordance with the previous resource consent.

Condition (12C)

12C The consent holder shall maintain a UV Transmissivity monitoring probe in the Duron UV system. The probe shall be linked to the treatment plant's SCADA system, with records of the hourly average UV transmissivity kept by the consent holder based on values observed at 5-minute intervals.

The graph below summarises the UVT hourly average.



It has been noticed that the UVT readings are not reliable and have fluctuated significantly since the 19th of September as shown above. The instrument supplier was on-site investigating, and they have recommended some improvements such as moving the UVT probe from the UV channel to the pre-UV channel, and installing the instrument in a horizontal position which might provide a more representative reading.

Condition (12D)

12D If the hourly average UV transmissivity recorded in accordance with 12C reduces below 45% then the consent holder shall:

- a. Notify the Manager as soon as practicable; and
- b. Initiate an investigation that meets the following requirements.

The investigation shall:

- i. Be undertaken by a suitably qualified and experienced professional.
- ii. Consider the results of the suspended solids monitoring, UV transmissivity from the daily grab samples, and other relevant plant performance measurements routinely taken by the consent holder.
- iii. Assess the likely cause of the UV transmissivity reducing below 45%.
- iv. If considered necessary, recommend further investigations, improvements, operational actions (including changes to the OMCP) or upgrades to reduce the risk of similar UV transmissivity records occurring in the future.
- v. Include an implementation programme for the recommendations, if any, set out in accordance with (iv).
- vi. Within 10 working days of the hourly average UV transmissivity falling below 45%, the consent holder shall inform the Manager of the outcomes of the investigation and which of the recommendations made in accordance with (iv) and (v) above it proposes to implement or has already implemented.

The UVT hourly average remained above the 45% limit during this reporting period. Therefore, Condition 12D is compliant.

Condition (14)

14. The consent holder shall collect representative receiving water samples from approximately 150 mm below the surface of water that is at least 500mm deep, once each calendar month at the following locations:

- a. At or about 140 metres generally east of the outfall.
- b. At or about 200 metres generally southwest of the outfall.
- c. Titahi Bay Beach generally at Toms Road.
- d. A control site, at a location to the satisfaction of the Manager.

Coordinates for all sampling sites shall also be recorded using a handheld GPS and provided in annual monitoring reports required under condition 19.

For each water sample collected under this condition, the consent holder shall record the site name, date, time, weather, wind, tidal conditions, pH, salinity, dissolved oxygen and water temperature at each sampling location.

For **July 2023**, the monthly shoreline sampling was performed in accordance with resource consent WGN980083 [33805] (previous consent), Condition 14 as follows:

Te Korohiwa Rocks

Date	Time	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions	WWTP Bypass/Overflow Event	Possible Source (if out of spec)
dd/mm/yyyy	hh:mm	cfu/100mL	cfu/100mL	--	--	--	--	Y/N	--
10/07/2023	13:05	130.0	40	W	Light	High	Flood	N	NA

Table 13: Shoreline Monitoring

200m West of Outfall

Date	Time	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions	WWTP Bypass/Overflow Event	Possible Source (if out of spec)
dd/mm/yyyy	hh:mm	cfu/100mL	cfu/100mL	--	--	--	--	Y/N	--
10/07/2023	12:30	10	10	W	Light	High	Flood	N	NA

Table 14: Shoreline Monitoring

200m East of Outfall

Date	Time	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions	WWTP Bypass/Overflow Event	Possible Source (if out of spec)
dd/mm/yyyy	hh:mm	cfu/100mL	cfu/100mL	--	--	--	--	Y/N	--
10/07/2023	12:10	10	10	W	Light	High	Flood	N	NA

Table 15: Shoreline Monitoring

Titahi Bay Beach South

Date	Time	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions	WWTP Bypass/Overflow Event	Possible Source (if out of spec)
dd/mm/yyyy	hh:mm	cfu/100mL	cfu/100mL	--	--	--	--	Y/N	--
10/07/2023	12:25	10	260	W	Light	High	Flood	N	NA

Table 16: Shoreline Monitoring

Titahi Bay Beach

Date	Time	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions	WWTP Bypass/Overflow Event	Possible Source (if out of spec)
dd/mm/yyyy	hh:mm	cfu/100mL	cfu/100mL	--	--	--	--	Y/N	--
10/07/2023	12:40	30	10	W	Light	High	Flood	N	NA

Table 17: Shoreline Monitoring

Mount Cooper

Date	Time	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions	WWTP Bypass/Overflow Event	Possible Source (if out of spec)
dd/mm/yyyy	hh:mm	cfu/100mL	cfu/100mL	--	--	--	--	Y/N	--
10/07/2023	12:00	20	160	W	Light	High	Flood	N	NA

Table 18: Shoreline Monitoring

Control

Date	Time	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions	WWTP Bypass/Overflow Event	Possible Source (if out of spec)
dd/mm/yyyy	hh:mm	cfu/100mL	cfu/100mL	--	--	--	--	Y/N	--
10/07/2023	12:50	10	10	W	Light	High	Flood	N	NA

Table 19: Shoreline Monitoring

Please note that the enterococci and faecal coliforms for the shoreline monitoring samples were analysed by the contract laboratory. Please note that bathing beach guidelines were used to generate the colouring for the Enterococci samples. Because there are no bathing beach guidelines for faecal coliforms, fresh water guidelines were applied. The following are the limits for both bacterial species:

Bacterial Species	Amber Limit	Red Limit
	cfu/100mL	cfu/100mL
Enterococci	140	280
Faecal Coliforms	260	550

The following is a summary of the monthly shoreline monitoring performed as part of resource consent WGN200229 [36816], Condition 14, **for August and September 2023:**

140m generally eastwards of the outfall

Date	Time	pH	Salinity	Dissolved Oxygen	Temp.	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	hh:mm	-	g/m3	g/m3	C	--	--	--	--
29/08/2023	12:05:00	8.1	35	10	11.8	S	Moderate	Mid	Flood
25/09/2023	12:25:00	8.0	36	10	13.0	N	Moderate	Mid	Ebb

Table 20: Shoreline Monitoring

200m generally southwestwards of the outfall

Date	Time	pH	Salinity	Dissolved Oxygen	Temp.	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	hh:mm	-	g/m3	g/m3	C	--	--	--	--
29/08/2023	12:40:00	8.1	34	10	12.0	S	Moderate	Mid	Flood
25/09/2023	12:50:00	8.0	35	10	12.8	N	Moderate	Mid	Ebb

Table 21: Shoreline Monitoring

Titahi Bay Beach At Toms Road - Surf Club

Date	Time	pH	Salinity	Dissolved Oxygen	Temp.	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	hh:mm	-	g/m3	g/m3	C	--	--	--	--
29/08/2023	12:55:00	7.8	36	10	12.3	S	Moderate	Mid	Flood
25/09/2023	12:10:00	8.0	35	10	13.2	N	Moderate	Mid	Ebb

Table 22: Shoreline Monitoring

Control

Date	Time	pH	Salinity	Dissolved Oxygen	Temp.	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	hh:mm	-	g/m3	g/m3	C	--	--	--	--
29/08/2023	12:20:00	8.2	34	10	11.5	S	Moderate	Mid	Flood
25/09/2023	11:45:00	7.9	36	9	12.9	N	Moderate	Mid	Ebb

Table 23: Shoreline Monitoring

Condition (15)

15. The samples collected from sites (a) to (d) in condition 14 shall be analysed for enterococci. In addition, the samples collected from sites (a), (b) and (d) shall be analysed for total ammonia nitrogen, nitrate nitrogen, nitrite nitrogen, dissolved reactive phosphorus, total nitrogen and total phosphorus.

140m generally eastwards of the outfall

Date	Time	Enterococci	Total Ammonia Nitrogen	Nitrate Nitrogen	Nitrite Nitrogen	Dissolved Reactive Phosphorus	Total Nitrogen	Total Phosphorus
dd/mm/yyyy	hh:mm	cfu/100mL	g/m3	g/m3	g/m3	g/m3	g/m3	g/m3
29/08/2023	12:05	10	0.01	0.1	0.1	0.09	0.23	0.034
25/09/2023	12:25	60	0.02	0.1	0.1	0.01	0.25	0.021

Table 23: Shoreline Monitoring

200m generally southwestwards of the outfall

Date	Time	Enterococci	Total Ammonia Nitrogen	Nitrate Nitrogen	Nitrite Nitrogen	Dissolved Reactive Phosphorus	Total Nitrogen	Total Phosphorus
dd/mm/yyyy	hh:mm	cfu/100mL	g/m3	g/m3	g/m3	g/m3	g/m3	g/m3
29/08/2023	12:40	10	0.01	0.1	0.1	0.066	0.27	0.084
25/09/2023	12:50	130	0.06	0.1	0.1	0.021	0.41	0.063

Table 24: Shoreline Monitoring

Titahi Bay Beach At Toms Road - Surf Club

Date	Time	Enterococci
dd/mm/yyyy	hh:mm	cfu/100mL
29/08/2023	12:55	70
25/09/2023	12:10	180

Table 25: Shoreline Monitoring

Control

Date	Time	Enterococci	Total Ammonia Nitrogen	Nitrate Nitrogen	Nitrite Nitrogen	Dissolved Reactive Phosphorus	Total Nitrogen	Total Phosphorus
dd/mm/yyyy	hh:mm	cfu/100mL	g/m3	g/m3	g/m3	g/m3	g/m3	g/m3
29/08/2023	12:20	10	0.01	0.1	0.1	0.006	0.26	0.019
25/09/2023	11:45	140	0.03	0.01	0.1	0.005	0.44	0.015

Table 26: Shoreline Monitoring

Please note that the enterococci and faecal coliforms for the shoreline monitoring samples were analysed by the contract laboratory

Please note that bathing beach guidelines were used to generate the colouring for the Enterococci samples. Because there are no bathing beach guidelines for faecal coliforms, fresh water guidelines were applied. The following are the limits for both bacterial species:

Bacterial Species	Amber Limit	Red Limit
	cfu/100mL	cfu/100mL
Enterococci	140	280
Faecal Coliforms	260	550

Table 27: Shoreline Monitoring Guidelines

Condition (16)

16. In the event of an incident notified under condition 22A and / or a discharge of partially treated wastewater, the consent holder shall:

- Notify the Manager as soon as practicable of the timing of the discharge, and the reason for the incident and / or the partially treated discharge.
- Take samples at the locations specified in condition 14 as soon as it is safe to do so, within 24 hours of the discharge commencing, and also approximately 48 hours after the discharge commenced, if it is safe to do so.
- Analyse the samples in accordance with condition 15.
- Assess compliance with condition 13.

The following is a summary of the discharge events that occurred at the Porirua WWTP during this reporting period. Notifications regarding discharge events were sent to GWRC.

Date	Duration	Type of Discharge	Average Flow	Peak Flow	Total Volume of Discharge	Consented	Cause	Monitoring Results
dd mmm yyyy	Hrs mins	---	L/s	L/s	m ³	Y/N		
01/08/2023	00:05	UV Bypass	0	0	10	N	Maintenance of UV bypass valve	Sampling campaign initiated
26/09/2023	08:24:00	Undisinfected effluent	355	640	10,765	N	Power fluctuation within the plant that turned the UV system off.	Sampling campaign initiated

Table 28: Discharge events

The following sampling was performed for the discharge on the **1st of August**. Unfortunately, by the time the discharge occurred, the new testing regime required by the new consent was still being arranged with the external laboratory, and the testing required under Condition 15 could not be completed, however, the following testing satisfies Condition 14:

140m Eastwards of the outfall

Date	Time	Enterococci	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	hh:mm	cfu/100mL	--	--	--	--
1/08/2023	10:20	180	S	Moderate	Low	Flood
2/08/2023	10:50	410	N	Moderate	Low	Flood
4/08/2023	10:35	40	N	Moderate	Low	Ebb
7/08/2023	10:40	370	N	Moderate	Low	Flood

Table 29: Shoreline Monitoring

200m Southwestwards of the outfall

Date	Time	Enterococci	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	hh:mm	cfu/100mL	--	--	--	--
1/08/2023	10:05	20	S	Moderate	Low	Flood
2/08/2023	10:40	50	N	Moderate	Low	Flood
4/08/2023	10:25	10	N	Moderate	Low	Ebb
7/08/2023	10:25	10	N	Moderate	Low	Flood

Table 30: Shoreline Monitoring

Titahi Bay Beach At Toms Road - Surf Club

Date	Time	Enterococci	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	hh:mm	cfu/100mL	--	--	--	--
1/08/2023	10:30	40	S	Moderate	Low	Flood
2/08/2023	11:00	520	N	Moderate	Low	Flood
4/08/2023	10:45	10	N	Moderate	Low	Ebb
7/08/2023	10:50	10	N	Moderate	Low	Flood

Table 31: Shoreline Monitoring

Control

Date	Time	Enterococci	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	hh:mm	cfu/100mL	--	--	--	--
1/08/2023	10:45	10	S	Moderate	Low	Flood
2/08/2023	11:10	310	N	Moderate	Low	Flood
4/08/2023	10:55	20	N	Moderate	Low	Ebb
7/08/2023	11:00	10	N	Moderate	Low	Flood

Table 32: Shoreline Monitoring

The following sampling was performed for the discharge on **26th September 2023**. It satisfies Conditions 14 and 15 of the resource consent.

140m generally eastwards of the outfall

Date	Time	Enterococci	pH	Salinity	Dissolved Oxygen	Temp.	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	hh:mm	cfu/100mL	-	g/m3	g/m3	C	--	--	--	--
27/09/2023	14:55	40	8	36	10	12.6	S	Moderate	Low	Flood
29/09/2023	12:30	180	7.9	33	8	13	N	Moderate	High	Ebb

Table 33: Shoreline Monitoring

Date	Time	Total Ammonia Nitrogen	Nitrate Nitrogen	Nitrite Nitrogen	Dissolved Reactive Phosphorus	Total Nitrogen	Total Phosphorus
dd/mm/yyyy	hh:mm	g/m3	g/m3	g/m3	g/m3	g/m3	g/m3
27/09/2023	14:55	0.02	0.1	0.1	0.019	0.25	0.021
29/09/2023	12:30	0.03	0.1	0.1	0.015	0.17	0.043

Table 34: Shoreline Monitoring

200m generally southwestwards of the outfall

Date	Time	Enterococci	pH	Salinity	Dissolved Oxygen	Temp.	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	hh:mm	cfu/100mL	-	g/m3	g/m3	C	--	--	--	--
27/09/2023	14:25	220	8	35	10	12.4	S	Moderate	Low	Flood
29/09/2023	12:50	700	7.5	33	10	13.2	N	Moderate	High	Ebb

Table 35: Shoreline Monitoring

Date	Time	Total Ammonia Nitrogen	Nitrate Nitrogen	Nitrite Nitrogen	Dissolved Reactive Phosphorus	Total Nitrogen	Total Phosphorus
dd/mm/yyyy	hh:mm	g/m3	g/m3	g/m3	g/m3	g/m3	g/m3
27/09/2023	14:25	0.01	0.1	0.1	0.022	0.2	0.046
29/09/2023	12:50	0.02	0.1	0.1	0.063	0.4	0.063

Titahi Bay Beach At Toms Road - Surf Club

Date	Time	Enterococci	pH	Salinity	Dissolved Oxygen	Temp.	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	hh:mm	cfu/100mL	-	g/m3	g/m3	C	--	--	--	--
27/09/2023	15:15	60	8.0	35	10	13.5	S	Moderate	Low	Flood
29/09/2023	12:20	340	8.1	34	8	13.0	N	Moderate	High	Ebb

Table 36: Shoreline Monitoring

Control

Date	Time	Enterococci	pH	Salinity	Dissolved Oxygen	Temp.	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	hh:mm	cfu/100mL	-	g/m3	g/m3	C	--	--	--	--
27/09/2023	15:35	10	7.9	36	9	13.2	S	Moderate	Low	Flood
29/09/2023	12:00	300	8.0	33	10	13.6	N	Moderate	High	Ebb

Table 37: Shoreline Monitoring

Date	Time	Total Ammonia Nitrogen	Nitrate Nitrogen	Nitrite Nitrogen	Dissolved Reactive Phosphorus	Total Nitrogen	Total Phosphorus
dd/mm/yyyy	hh:mm	g/m3	g/m3	g/m3	g/m3	g/m3	g/m3
27/09/2023	15:35	0.01	0.1	0.1	0.007	0.079	0.022
29/09/2023	12:00	0.06	0.1	0.1	0.005	0.439	0.015

No effects listed under Condition 13 were observed during the discharge events for this reporting period.

Condition (35A)

35A. If:

a. Prior to certification of the enterococci trigger under condition 21B, monitoring undertaken in accordance with condition 8 identifies that the concentration of faecal coliforms in the treated wastewater has exceeded 2,000 cfu per 100 millilitres on 2 or more consecutive days; or

b. Following certification of the enterococci trigger under condition 21B, monitoring undertaken in accordance with condition 8 identifies that the enterococci concentration in the treated wastewater has exceeded the enterococci trigger value set in accordance with condition 21B on 2 or more consecutive days, then the consent holder shall:

i. Notify the Manager as soon as practicable after receipt of results showing that the faecal coliforms or enterococci trigger has been exceeded for 2 consecutive days; and

ii. Initiate an investigation that meets the following requirements.

The investigation shall:

c. Be undertaken by a suitably qualified and experienced professional.

d. Consider the results of the UV transmissivity monitoring undertaken in accordance with condition 8.

e. Assess the likely cause of the exceedance of the faecal coliforms or enterococci trigger value.

f. If considered necessary, recommend further investigations, improvements, operational actions or upgrades to reduce the risk of similar exceedances of the trigger value occurring in the future.

g. Include an implementation programme for the recommendations, if any, set out in accordance with (f).

Within 1 calendar month of the receipt of results showing that the faecal coliforms or enterococci trigger has been exceeded for 2 consecutive days, the consent holder shall inform the Manager of the outcomes of the investigation and which of the recommendations made in accordance with (f) and (g) above it proposes to implement.

The faecal coliform results reported under Condition 8 did not exceed 2,000 cfu per 100 millilitres on 2 or more consecutive days during this reporting period.

Condition 5

5. The consent holder shall keep a record of any complaints received. The complaints will be forwarded to the Manager within twenty-four hours of the complaint being received by the consent holder. The consent holder shall record:
- a. The complainant's name (if provided).
 - b. The location of the odour incident.
 - c. The time of the odour incident.
 - d. The wind direction and speed.
 - e. The plant operating conditions at the time of the complaint.

There were no complaints received during the July to September 2023 reporting period.

Condition 6

6. Any incident that may cause or has caused adverse effects on the environment at or beyond the site boundary shall be notified to the Manager within twenty-four hours. This includes any incidents that result in complaints. A written report detailing the reasons for the incident, measures to mitigate the incident and measures to prevent recurrence shall be forwarded to the Manager within seven working days.

There were no incidents resulting in complaints during the July to September 2023 reporting period.

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