

Porirua Wastewater Treatment Plant

October - December 2024

Quarterly Resource Consents Report

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Control Sheet

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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 Porirua Wastewater Treatment Plant resource consents.

Coastal Discharge Permit - 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 following is a brief overview of the compliance with the consent conditions:

Resource Consent Condition	Compliant / Non-Compliant / Not Applicable
4	Compliant
5J (c)	Compliant
6	Compliant
7	Non compliant
8	Compliant
9	Compliant
9A	Non compliant
10	Compliant
11	Compliant
12	Compliant
12(A)	Compliant
12(C)	Compliant
12(D)	Non compliant
14	Compliant
15	Compliant
16	Compliant
28	Compliant
29	Compliant
35A	Compliant

Table 1: WGN200229 [36816] Resource Consent Condition Compliance

Air Discharge Permit - 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 or about map reference NZMS 260: R27;632.096. 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

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Coastal Discharge Permit WGN200229 [36816]

Volumes of Inflows to and Effluent from Plant - 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	October 2024		November 2024		December 2024	
	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	21119	22734	22448	23872	22092	21231
2	22135	24325	22447	24492	21018	21881
3	22774	24323	24818	25852	19611	22343
4	21470	23350	22199	23558	19337	21074
5	23892	25068	27058	27772	21681	22528
6	27974	29133	25177	25685	20351	21400
7	25636	26384	23214	24446	21286	22033
8	24378	25158	21094	22484	31522	28578
9	22379	24306	31482	31940	22926	22345
10	21134	23609	29756	30677	21668	21108
11	20649	22873	25494	25610	20357	20724
12	21316	23570	23306	25533	20158	20545
13	50008	49698	21618	125942	19518	20197
14	53926	54929	40935	165231	19947	21067
15	27628	29594	45308	124242	21429	22204
16	24858	26347	29519	30316	35655	34901
17	23485	25061	26712	27321	22651	23501
18	21794	23295	23942	26021	21125	22359
19	22840	24768	22853	24104	28869	29156
20	24824	25727	23930	24778	23661	24808
21	22044	23302	21859	23681	27918	29021
22	21359	23384	21014	22987	22999	24750
23	20396	21831	21324	23063	20645	22961
24	20606	22297	24481	25456	21044	22950
25	20589	22923	22660	23190	20269	21993
26	34635	34715	21035	22654	29570	30123
27	25214	26334	20060	22472	24127	25253
28	37885	38190	20766	22391	20701	22633
29	29767	30590	19261	21383	20036	21524
30	32085	33531	17434	18007	6918	28211
31	18421	19412			16976	25988

Table 3. Daily Influent and Effluent volumes

Ecological Survey - Condition (5J(c))

5J (c) . If the alternate WWTPWG is established in accordance with condition 5I then the consent holder shall prepare, implement and review a Monitoring Plan in accordance with conditions 5E and 5F, except that the requirement in condition 5F(b) shall be replaced with the following:

i. The consent holder shall engage a suitable qualified coastal ecologist to conduct a visual survey of the quantity and size of range of paua, kina and lobster along the six transects used in the Cawthron (2019) ecological survey. The survey shall be undertaken once before the third anniversary of the commencement of the consent and also be included within the scope of any ecological survey undertaken in accordance with condition 28.

Noting that the consent became effective on 14 July 2023, the survey required under this condition is initially due before 14 July 2026 and then (under condition 28) between 15 July 2031 and 14 July 2032 and between 15 July 2037 and 14 July 2038, the ecological survey was not required during this reporting period.

Wastewater Sampling Point - Condition (6)

6. The consent holder shall, to the satisfaction of the Manager, identify a suitable place to sample the wastewater after it leaves the treatment plant but prior to it entering the Rakutane Point outfall. That sampling point shall be used for the sampling required by conditions 7 and 10.

Sampling point as required by condition 6 has been established.

Wastewater Analysis - 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.

A missing sample on 23 October = non compliance for this condition.

Analysis for UV transmissivity, faecal coliforms and enterococci - 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. Faecal coliform compliance has been assessed under Condition 35A.

Day	October 2024			November 2024			December 2024		
	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	32	10	65.0	148	150	64.6	32	10	61.8
2	14	40	64.2	300	10	63.7	490	10	59.0
3	10	10	64.5	179	10	60.0	10	10	57.6
4	55	10	64.8	173	10	59.9	20	10	62.8
5	26	10	62.6	212	10	64.1	10	30	62.9
6	10	10	63.1	155	10	62.3	112	10	59.4
7	77	10	64.6	22	10	64.9	424	10	60.9
8	87	10	62.6	126	10	60.7	87	10	55.9
9	95	10	63.0	24	10	61.7	20	10	55.0
10	76	10	60.4	10	10	64.5	24	10	61.9
11	10	10	66.0	184	10	64.2	53	10	63.5
12	155	20	64.8	141	10	62.9	55	10	61.8
13	141	10	63.5	297	10	63.6	100	10	62.9
14	14	30	68.1	130	10	65.0	10	10	62.2
15	24	10	66.1	30	10	65.6	14	10	60.8
16	63	10	67.8	110	20	66.2	251	700	59.9
17	118	30	66.0	316	10	61.7	7483	10	63.6
18	10	10	66.4	75	10	60.3	118	20	59.9
19	60000	6000	64.6	10	10	62.4	110	10	59.2
20	122	20	61.6	14	10	59.1	110	10	63.0
21	24	10	57.5	24	10	65.2	10	10	59.9
22	190	10	58.5	200	80	62.5	10	60	65.6
23	95	10	61.5	10	20	62.9	10	40	44.3
24	118	10	63.3	14	20	63.5	69	10	60.9
25	158	10	63.5	145	10	63.7	14	10	60.4
26	14	30	64.2	883	10	64.0	20	10	60.8
27	10	10	63.8	525	60	62.9	145	10	56.3
28	10	10	62.9	469	30	61.8	41	10	63.2
29	24	40	65.5	182	10	63.2	47	10	61.3
30	10	10	62.8	35	10	62.3	10	10	59.2
31	35	150	64.6				24	40	64.1
Limits	2000	-	-	2000	-	-	2000	-	-

Table 4. Daily Faecal coliform, Enterococci and UVT results

Analysis for metals and other - 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.

Analysis for Total Ammonia Nitrogen - 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).

Day	October 2024	November 2024	December 2024
	Total Ammonia Nitrogen mg/L	Total Ammonia Nitrogen mg/L	Total Ammonia Nitrogen mg/L
1			
2	31.6		
3			
4			
5			36.3
6			
7		27.2	
8			
9	28.8		
10			
11			28.3
12			
13		30.1	
14			
15			
16	20.4		
17			21.1
18			
19			
20		33.9	
21			
22			
23	No results are available as the sample was mislaid		
24			
25			33.5
26			
27		33.5	
28			
29			
30	22.1		
31			
Limit	6 mg/L	6 mg/L	6 mg/L

Table 5. Weekly Total ammonia nitrogen

Dates, when the Total Ammonia Nitrogen weekly results exceed the 6 mg/L limit stated in Condition 33b are highlighted in red. The missing sample for October means this condition is non compliant. Investigation of the Total Ammonia Nitrogen concentration increase is ongoing. A report is available on the Porirua page of the Wellington Water website¹.

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<https://www.wellingtonwater.co.nz/assets/The-Network/Wastewater/Wastewater-Treatment-Plants/Porirua/WWL092-TM01-Porirua-WWTP-Effluent-Ammonia-Investigation-v2.pdf?file-size=888+KB&file-type=pdf>

Bacterophage Analysis - 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.

The following are the results of the sampling performed under Condition 10.

October 2024				November 2024				December 2024			
Influent Monthly grab		Effluent Weekly grab		Influent Monthly grab		Effluent Weekly grab		Influent Monthly grab		Effluent Weekly grab	
Date	PFU/l	Date	PFU/l	Date	PFU/l	Date	PFU/l	Date	PFU/l	Date	PFU/l
15/10/24	24000	02/10/2024	8700	19/11/24	45000	05/11/2024	69	10/12/24	110000	03/12/2024	98
		09/10/2024	10			12/11/2024	88			10/12/2024	18000
		16/10/2024	3100			19/11/2024	450			17/12/2024	910
		23/10/2024	98			26/11/2024	130			27/12/2024	10
		30/10/2024	59								

Table 6. Viral indicator testing

Sampling shall be performed by an International Accreditation New Zealand (IANZ) registered laboratory - Condition (11)

11. All sampling techniques employed in respect of the conditions of this content shall be acceptable to the Wellington Regional Council. All analyses undertaken in the connection with this consent shall be performed by an International Accreditation New Zealand (IANZ) registered laboratory, or otherwise as especially approved by the Greater Wellington Regional Council.

Analysis is undertaken by Eurofins.

Wastewater Quality - 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	October 2024			November 2024			December 2024		
	Results	90-day Geometric Mean	90-day 90th Percent Compliance	Results	90-day Geometric Mean	90-day 90th Percent Compliance	Results	90-day Geometric Mean	90-day 90th Percent Compliance
	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	5	11	22	23	12.3	26.2	21	15.8	28
2	7	11	22	24	12.4	26.2	18	16	28
3	8	11	22	35	12.6	27	19	16.3	28
4	26	11	22	31	12.7	27.2	16	15.9	28
5	12	11	22	22	12.9	27.2	20	16.2	28
6	28	11	22	12	12.9	27.2	19	16.4	28
7	27	12	23	14	13	27.2	20	16.6	28
8	21	12	23	59	13.2	28	14	16.6	28
9	12	12	23	16	13.3	28	15	16.7	28
10	19	12	22	17	13.4	28	18	16.8	28
11	13	11	22	22	13.5	28	20	17	28
12	19	11	22	12	13.6	28	18	17.2	28
13	18	11	22	11	13.8	28	18	17.3	28
14	12	11	22	22	13.8	28	17	17.2	28
15	28	11	22	18	13.9	28	21	17.3	28
16	21	11	22	10	13.8	28	20	17.4	28
17	13	11	22	15	13.9	28	24	17.6	28
18	8	11	22	28	14.1	28	17	17.8	28
19	29	11	22	21	14.3	28	12	17.8	28
20	28	11	22	11	14.3	28	8	17.7	28
21	28	12	23	14	14.4	28	10	17.5	28
22	12	12	23	14	14.5	28	9	17.4	28
23	No results are available as the sample was mislaid			14	14.6	28	6	17.1	28
24	17	12	24	16	14.6	28	13	17	28
25	17	12	24	20	14.9	28	6	16.7	28
26	21	12	24	18	15	28	6	16.4	28
27	18	12	24	15	15.2	28	7	16.2	28
28	17	12	24	13	15.4	28	7	16.1	28
29	14	12	24	15	15.4	28	8	16	28
30	27	12	26	35	15.6	28	8	16.1	28
31	21	12	26				6	16.1	28
Limits	-	30	75	-	30	75	-	30	75

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	October 2024			November 2024			December 2024		
	Results	90-day Geometric Mean	90-day 90th Percent Compliance	Results	90-day Geometric Mean	90-day 90th Percent Compliance	Results	90-day Geometric Mean	90-day 90th Percent Compliance
	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	9	10.5	21	6	9.6	16	6	9.4	16
2	6	10.5	21	8	9.5	16	5	9.2	15.2
3	6	10.5	21	15	9.6	16	5	9.2	15.2
4	6	10.5	21	6	9.5	16	5	8.8	15
5	8	10.3	19.2	11	9.5	16	9	8.8	15
6	16	10.4	19.2	6	9.5	16	8	8.9	15
7	9	10.5	19.2	13	9.5	16	6	8.8	15
8	10	10.5	19.2	6	9.5	16	7	8.8	15
9	8	10.5	19.2	5	9.4	16	9	8.8	15
10	6	10.5	19.2	5	9.3	16	9	8.8	15
11	14	10.6	19.2	16	9.4	16	15	8.9	15
12	13	10.6	19.2	6	9.4	16	9	8.8	15
13	12	10.6	19.2	8	9.4	16	6	8.8	15
14	7	10.5	19.2	10	9.4	16	6	8.8	15
15	11	10.5	19.4	16	9.5	16	8	8.7	15
16	7	10.4	19.2	15	9.5	16	11	8.7	15
17	7	10.3	19.2	8	9.5	16	12	8.7	15
18	37	10.4	19.2	19	9.6	16	6	8.7	15
19	7	10.3	19.2	6	9.6	16	7	8.6	15
20	16	10.3	19.2	8	9.6	16	23	8.7	15.2
21	14	10.3	19.2	8	9.5	16	16	8.8	16
22	7	10.2	16.3	7	9.5	16	10	8.8	16
23	No results are available as the sample was mislaid			11	9.6	16	11	8.8	16
24	6	10	16	9	9.6	16	6	8.7	16
25	5	9.9	16	19	9.7	16	7	8.6	15.2
26	9	10	16	8	9.6	16	6	8.6	15.2
27	7	9.8	16	15	9.6	16	6	8.6	15.2
28	5	9.7	16	14	9.7	16	6	8.6	15.2
29	5	9.7	16	8	9.5	16	6	8.6	15.2
30	12	9.7	16	6	9.4	16	6	8.5	15.2
31	8	9.6	16				6	8.5	15.2
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.

Concentrations of metals and other compounds - 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	October 2024	November 2024	December 2024
Total Arsenic	g/m ³	0.023	0.002	0.002	0.002
Total Cadmium	g/m ³	0.055	0.001	0.001	0.001
Total Chromium	g/m ³	0.044	0.002	0.001	0.002
Total Copper	g/m ³	0.013	0.002	0.002	0.002
Total Nickel	g/m ³	0.07	0.001	0.001	0.001
Total Lead	g/m ³	0.044	0.001	0.001	0.001
Total Zinc	g/m ³	0.08	0.016	0.016	0.017
Total Mercury	g/m ³	0.001	0.001	0.001	0.001
Phenol	g/m ³	2.7	0.01	0.01	0.01
Nitrate Nitrogen	g/m ³	-	1.1	1.71	1.65
Nitrite Nitrogen	g/m ³	-	0.13	0.21	0.15
Dissolved Reactive Phosphorus	g/m ³	-	0.134	1.53	1.04
Total Nitrogen	g/m ³	-	16.8	33.5	32.7
Total Phosphorus	g/m ³	-	0.7	2.17	1.38

Table 9. Monthly heavy metals and phenol

UV Transmissivity monitoring probe - 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 rolling average.

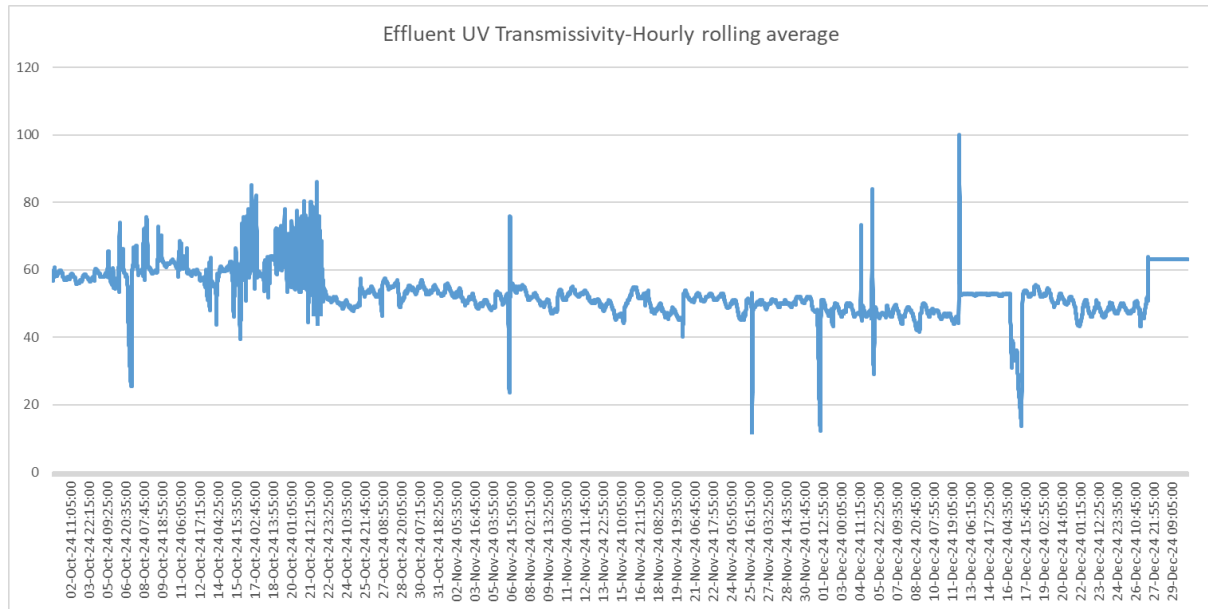


Figure 1: UVT values during October-December 2024 - online measurement

Hourly average UV transmissivity - 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 value went below the 45% limit on two occasions in December.

On 17 December was notified on 19 December. The Duron UVT sensor was found to be out of calibration on 16 December. The TAK system was activated. As part of the morning investigation, operators found the baffle plate by the inlet of the TAK UV was clogged with algae. While this was immediately cleaned, it is believed to have contributed to a restriction of flows through the TAK UV which caused the bypass channel to open up to 11% for five minutes. There is no flow meter in the by-pass and it is not possible to calculate the discharge through the bypass with acceptable accuracy.

A second incident on 26 December was investigated which noted there was no apparent sludge carry-over and concluded the dip was the result of a defect with the probe. An investigation was undertaken and the full report is available on the Porirua page of the Wellington Water website.

Monthly Environmental Monitoring - 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.

The following is a summary of the monthly shoreline monitoring performed as part of resource consent WGN200229 [36816], Condition 14:

140m generally eastwards of the outfall

Date	Enterococci	pH	Salinity	Dissolved Oxygen	Temp.	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	-	g/m3	g/m3	C	--	--	--	--
17/10/2024	<10	8.17	33	11.59	13.6	NW	Light	High	Flood
26/11/2024	10	8.08	33	10.59	18.2	NW	Strong	High	Ebb
16/12/2024	70	8.12	35	9.82	18.8	NW	Light	High	Flood

Table 11: Shoreline Monitoring- 140m generally eastwards of the outfall

Date	Total Ammonia Nitrogen	Nitrate Nitrogen	Nitrite Nitrogen	Dissolved Reactive Phosphorus	Total Nitrogen	Total Phosphorus
dd/mm/yyyy	g/m3	g/m3	g/m3	g/m3	g/m3	g/m3
17/10/2024	<0.01	<0.1	<0.1	0.009	0.473	<0.05
26/11/2024	0.592	<0.1	<0.1	<0.002	0.592	<0.005
16/12/2024	0.09	<0.1	<0.1	<0.002	0.24	<0.05

Table 12: Shoreline Monitoring- 140m generally eastwards of the outfall

200m generally southwestwards of the outfall

Date	Enterococci	pH	Salinity	Dissolved Oxygen	Temp.	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	-	g/m3	g/m3	C	--	--	--	--
17/10/2024	<10	8.12	35	11.45	13.7	NW	Light	High	Flood
26/11/2024	30	8.19	34	10.35	17.1	NW	Strong	High	Ebb
16/12/2024	<10	8.07	34	9.65	18.5	NW	Light	High	Flood

Table 13: Shoreline Monitoring- 200m generally southwestwards of the outfall

Date	Total Ammonia Nitrogen	Nitrate Nitrogen	Nitrite Nitrogen	Dissolved Reactive Phosphorus	Total Nitrogen	Total Phosphorus
dd/mm/yyyy	g/m3	g/m3	g/m3	g/m3	g/m3	g/m3
17/10/2024	0.6	<0.1	<0.1	0.021	0.493	<0.05
26/11/2024	0.539	<0.1	<0.1	0.026	0.539	0.046
16/12/2024	1.09	<0.1	<0.1	0.05	1.3	0.061

Table 14: Shoreline Monitoring-200m generally southwestwards of the outfall

Titahi Bay Beach At Toms Road - Surf Club

Date	Enterococci	pH	Salinity	Dissolved Oxygen	Temp.	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	-	g/m3	g/m3	C	--	--	--	--
17/10/2024	20	8.09		10.89	13.3	NW	Light	High	Flood
26/11/2024	10	8.15		10.47	8.15	NW	Strong	High	Ebb
16/12/2024	10	8.13		9.78	18.7	NW	Light	High	Flood

Table 15: Shoreline Monitoring- Titahi Bay Beach At Toms Road - Surf Club

Control

Date	Enterococci	pH	Salinity	Dissolved Oxygen	Temp.	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	-	g/m3	g/m3	C	--	--	--	--
17/10/2024	<10	8.13	35	11.79	13.4	NW	Light	High	Flood
26/11/2024	<10	8.03	33	11.34	17	NW	Strong	High	Ebb
16/12/2024	<10	8.08	34	9.81	19.1	NW	Light	High	Flood

Table 16: Shoreline Monitoring- Control site

Date	Total Ammonia Nitrogen	Nitrate Nitrogen	Nitrite Nitrogen	Dissolved Reactive Phosphorus	Total Nitrogen	Total Phosphorus
dd/mm/yyyy	g/m3	g/m3	g/m3	g/m3	g/m3	g/m3
17/10/2024	<0.01	<0.1	<0.1	<0.002	0.196	<0.05
26/11/2024	9:52	0.01	<0.1	<0.1	<0.002	0.268
16/12/2024	0.01	<0.01	<0.01	0.002	0.199	<0.05

Table 17: Shoreline Monitoring- Control site

Monthly Environmental Monitoring Analysis - 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.

All monitoring performed for the condition has been provided in the previous sections of this report under Condition 14.

Incident Notifications - 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:

- a. 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.
- b. 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.
- c. Analyse the samples in accordance with condition 15.
- d. Assess compliance with condition 13.

There were no incident notifications in October and November. There were three notifications in December as follows:

Date	Duration	Total Volume of Discharge	Cause
	hh:mm	m ³	
02/12/24	00:09	NA	Work to install a stand-by generator
17/12/24	00:05	NA	Hi flow in pre-UV channel activated bypass
26/12/24	00:24	367	UV transmissivity below 45%

Following the installation of the new standby generator connection on 2 December there were 2 brief discharges (fully treated but not UV disinfected) into Rukutane Point for a total of nine minutes, between 06:47 - 07:14. The discharge volume is 'NA' because it was not possible to calculate the discharge through the by-pass with acceptable accuracy. Normal discharge protocols were followed.

On 17 December was notified on 19 December. The Duron UVT sensor was found to be out of calibration on 16 December. The TAK system was activated. As part of the morning investigation, operators found the baffle plate by the inlet of the TAK UV was clogged with algae. While this was immediately cleaned, it is believed to have contributed to a restriction of flows through the TAK UV which caused the bypass channel to open up to 11% for five minutes. There is no flow meter in the by-pass and it is not possible to calculate the discharge through the bypass with acceptable accuracy.

The incident on 26 December was investigated in accordance with the requirements set out in condition 12D (above). An investigation was undertaken and the full report is available on the Porirua page of the Wellington Water website.

Ecological survey - Condition (28)

28. The consent holder shall commission an ecological survey of the receiving waters for the discharge. The survey shall involve the collection of information on the biota of the intertidal and shallow-subtidal habitats adjacent to the existing outfall at Rakutane Point, at Round point to the west of the existing outfall, and at a reference location 300m east of the outfall. The survey methods should be comparable with those used for the ecological survey included in Appendix F in the application. The results of the survey shall be incorporated into a report prepared by a suitably qualified and experienced coastal ecologist.

Noting that the consent became effective on 14 July 2023, the survey required under this condition is due between 15 July 2031 and 14 July 2032 and between 15 July 2037 and 14 July 2038. The ecological survey was not required during this reporting period.

Ecological survey - Condition (29)

29. A survey and report required under condition 28 shall be completed and submitted to the Manager:
- a) Between the 8th and the 9th anniversary of the commencement of this consent, and
 - b) Between the 14th and 15th anniversary of the commencement of this consent.

Noting that the consent became effective on 14 July 2023, the survey required under this condition is due between 15 July 2031 and 14 July 2032 and between 15 July 2037 and 14 July 2038. The ecological survey was not required during this reporting period.

UV disinfection performance - 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.

There were no exceedances for two or more consecutive days in the reporting period (see page 7).

Air Discharge Permit - WGN200229 [36727]

Record of Complaints - 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.

Details on odour complaints are published on the Wellington Water website.

<https://www.wellingtonwater.co.nz/resources/topic/wastewater/wastewater-treatment-plants/porirua-wastewater-treatment-plant/>.

No odour complaints were received during the reporting period.

Incident Notifications - 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.

Details on odour complaints are published on the Wellington Water website.

<https://www.wellingtonwater.co.nz/resources/topic/wastewater/wastewater-treatment-plants/porirua-wastewater-treatment-plant/>.

No odour complaints were received during the reporting period.

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