Owhanake Wastewater Treatment Plant
2024-2025 Annual Report

Final - September 2025

Watercare

QUALITY INFORMATION

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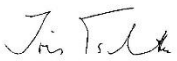
REVISION HISTORY

Rev	Revision Date	Name	Position	Signature
1	17/09/2025	Michiel Jonker	Environmental Care Manager	
2	26/09/2025	Iris Tscharntke	Operations Controller	
3	29/09/2025	Jonathan Piggot	Head of Wastewater	

APPROVED

Date	Name	Position	Signature
29/09/2025	Michiel Jonker	Environmental Care Manager	

CONSENT CHANGE AND MONITORING HISTORY

Change type	Description	Effective date	Reference / condition	Reporting / monitoring implications
Management plan update	Operations and Management Plan updated to reflect processes for plant B.	Feb 2020	25	N/A
Management plan update	Air Quality Management Plan updated.	Jul 2024	13	N/A

LIST OF ACRONYMS AND ABBREVIATIONS

Abbreviation	Definition
AC	Auckland Council
AEE	Assessment of Environmental Effects
ANZG	Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2018)
APT	Additional Primary Treatment
BOD	Biochemical Oxygen Demand
cBOD5	Carbonaceous Biochemical Oxygen Demand (5-day)
CFU	Colony Forming Units
DO	Dissolved Oxygen
DRP	Dissolved Reactive Phosphorus
MBR	Membrane Bioreactor
MCI	Macroinvertebrate Community Index
MLSS	Mixed Liquor Suspended Solids
N	Nitrogen
NH_4-N / NHx-N	Ammoniacal Nitrogen
pH	Potential of Hydrogen (measure of acidity/alkalinity)
QMCI	Quantitative Macroinvertebrate Community Index
RMA	Resource Management Act 1991
SS / TSS	Suspended Solids / Total Suspended Solids
TN	Total Nitrogen
TP	Total Phosphorus
UV	Ultraviolet Disinfection
WWTP	Wastewater Treatment Plant

EXECUTIVE SUMMARY

This 2024-2025 Annual Report provides an overview of the operations, performance, and compliance of the Owhanake Wastewater Treatment Plant (WWTP) located on Waiheke Island. The reporting period covers 1 July 2024 to 30 June 2025. The Owhanake WWTP is operated by Watercare and discharges treated wastewater into the Matiatia wetland before it flows into Matiatia Bay. The plant has operated under the terms of resource consents for both water discharge and air discharge, with the most recent consent-related compliance assessments documented in this report.

Key highlights from the reporting year include:

- Plant operations: The plant remained consistent with no major operational changes in 2024-2025. The average daily effluent discharge was 38.66 m^3, well within the consented limit of 250 m^3/day. The plant did not accept any new trade waste connections during the reporting period.
- Effluent quality: The Owhanake WWTP complied with most of its consent conditions, however there were a total of 22 exceedances across $cBOD_5$, ammoniacal nitrogen and total nitrogen in the effluent, leading to temporary non-compliance.
- Receiving environment: Monthly monitoring of the receiving waters in the tributaries and wetlands downstream of the discharge showed nutrients were highest at the discharge point, however other parameters were more variable throughout the wetland.
- Effluent reuse: Watercare continued to explore options for the beneficial reuse of treated wastewater, particularly for firefighting and roadworks. Targeted sampling and spatial constraints were investigated.
- Air quality: The WWTP complied fully with its air discharge consent, and no objectionable odours or air quality issues were reported during the period.
- Complaints and incidents: No complaints or significant incidents were reported regarding the operation of the plant.

Overall, the Owhanake WWTP demonstrated some non-compliances with effluent quality, however compliance was met with most consent conditions. Evidence suggests little to no widespread impacts in the receiving environment as a result, indicating no more than minor effects. Future actions will focus on maintaining compliance and advancing effluent reuse opportunities.

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1 INTRODUCTION

This annual report presents the results for the Owhanake Wastewater Treatment Plant (WWTP) from 1 July 2024 to 30 June 2025. The report includes:

- A description of the WWTP
- Relevant consents and management plants
- Plant performance
- Summary of compliance.

Table 1-1 lists the active consents for the Owhanake WWTP. Watercare moved to “Plant B” conditions under the discharge to water consent in January 2020.

Table 1-1: Owhanake WWTP resource consents

Consent type	Consent number	Expiration date
Water discharge permit	37282	31/12/2027
Air discharge permit	DIS60341182	21/08/2054

2 TREATMENT PLANT

2.1 Current operation

The WWTP is located at 61 Ocean View Road, Waiheke Island. Tertiary treated effluent discharges into a constructed wetland, then the natural Matiatia wetland before draining into Matiatia Bay. The treatment plant comprises:

- A primary tank (APT) fitted with 4 Zoeller effluent filters (0.78 mm)
- Two reticulation tanks for stormflow buffering with feed pumps
- UV disinfection
- One MBR plant (plant B) with two containers.

Plant B, the membrane bioreactor (MBR) plant, has:

- Fine screen compactor
- Anoxic tank 1
- Aeration tank
- Anoxic tank 2
- Membrane tank
- WAS tanks
- Dosing of the following chemicals: acetic acid (denitrification), aluminium sulphate (phosphorus removal), soda ash solution (pH control)

2.2 Changes in 2024-2025

Chemical tanks were installed to allow for an increase in chemical dosing as required. This project was completed in response to effluent quality exceedances in 2023-2024 and 2024-2025 (Section 3.5). No customers requiring Trade Waste Agreements connected to the Owhanake WWTP in 2024-2025.

2.3 Changes in 2025-2026

No upgrades are planned for 2025-2026.

3 COMPLIANCE

3.1 Introduction

Watercare assesses compliance with the consent using the same compliance rating system utilised by Auckland Council (Table 3-1).

The assessment of the WWTP performance considers:

- Results of compliance monitoring
- Recorded incidents and complaints
- Receiving environment monitoring results

Table 3-1: Compliance assessment criteria

Rating	Detail
Category 1	Watercare has complied with the consent condition. Where a resource consent condition refers to a provision in a Management Plan, then the plan has been referred to in assessing consent compliance.
Category 2	Watercare has not complied with the consent condition. Watercare has assessed the non-compliance as technical or having no more than minor adverse effect.
Category 3	Watercare has not complied with the consent condition. Watercare has assessed the non-compliance having the potential to result in more than minor adverse effects on the environment. Alternatively, since the last audit, there is evidence of repeat Category 2 non-compliance.
Category 4	Watercare has not complied with the consent condition. Watercare has assessed the non-compliance as having the potential to cause significant adverse effects on the environment. Alternatively, since the last audit, there is evidence of repeat Category 3 non-compliance.

3.2 Method statement

Operational data were extracted from Auckland Council environmental data portal and internal monitoring databases. See Appendix C and D for sampling locations and data download information.

Monitoring was carried out in accordance with the specific conditions of the consents and the approved Management Plans, including:

- Influent monitoring (Condition 29(a)): Monthly grab samples of the primary treated influent were collected and analysed. Parameters included pH, temperature, conductivity, dissolved oxygen (DO), carbonaceous biochemical oxygen demand ($cBOD_5$), total suspended solids (TSS), total nitrogen (TN), ammoniacal nitrogen (NHx-N), nitrate (NO_3-N), nitrite (NO_2-N), total phosphorus (TP), dissolved reactive phosphorus (DRP), and oil and grease (O&G). Although there are no numeric limits for influent, these results provide context for assessing plant performance.
- Effluent monitoring (Conditions 34–36): Weekly grab samples of final treated effluent were collected immediately prior to discharge to the constructed wetland (site S11, post-UV). Parameters included pH, temperature, DO, $cBOD_5$, TSS, TN, NHx-N, NO_3-N, NO_2-N, TP, DRP,

O&G, and Escherichia coli (E. coli). E. coli was sampled weekly in summer and fortnightly in winter, with a consented limit of ≤50 cfu/100 mL post-UV disinfection.

- Effluent loading: Statistical analysis of effluent quality trends (2020–2025) was undertaken using non-parametric tests (Wilcoxon, Mann–Kendall) to identify temporal trends
- Flow monitoring: Continuous measurement of influent and effluent volumes using calibrated flow meters, in line with Condition 27 of the discharge permit.
- Air quality: Weekly site walkovers, odour checks at the boundary, and inspection of odour control systems in line with Conditions 4–6 of the air discharge permit.
- Receiving environment: Monthly grab samples from six stream and wetland monitoring sites (S1–S7) downstream of the discharge, tested for nutrients, $cBOD_5$, suspended solids, and microbiological parameters. Receiving environment data were also compared against upstream control sites to evaluate the relative contribution of WWTP discharges versus other catchment inputs.
- Sediment monitoring: Annual surficial sediment sampling 10 m downstream of the outfall for dissolved and total recoverable trace metals (Condition 29(c)(iv)).
- Macroinvertebrate surveys: Voluntary supplementary sampling undertaken in September 2024 to provide additional context on ecological health.

3.3 Plant performance

3.3.1 Influent and effluent volumes

Figure 3-1 shows the daily wastewater flow into the WWTP (total, commercial and the Matiatia toilets) and rainfalls for 2024-2025. The plant experienced some increases in total inflow due to ingress and infiltration. During the heaviest rainfall periods, the high influent resulted in process difficulties in nutrient removal. See Section 3.5 for further details.

Figure 3-2 shows the daily effluent discharge and rainfall. The average daily discharge volume for 2024-2025 was 38.66 m^3, with an annual total of 14,110 m^3. These volumes are similar to 2023-2024, when the average flow was 38.71 m^3/day and an annual total of 14,168 m^3. The average effluent flow during summer (November 2024 to April 2025 inclusive) was 42 m^3/day and during the winter period (July 2024 to October 2024, and May 2025 to June 2025, inclusive) was 35 m^3/day. Taking away the wet weather flow days (when rainfalls were >0.2 mm), the annual average dry weather effluent flow was 37 m^3/day.

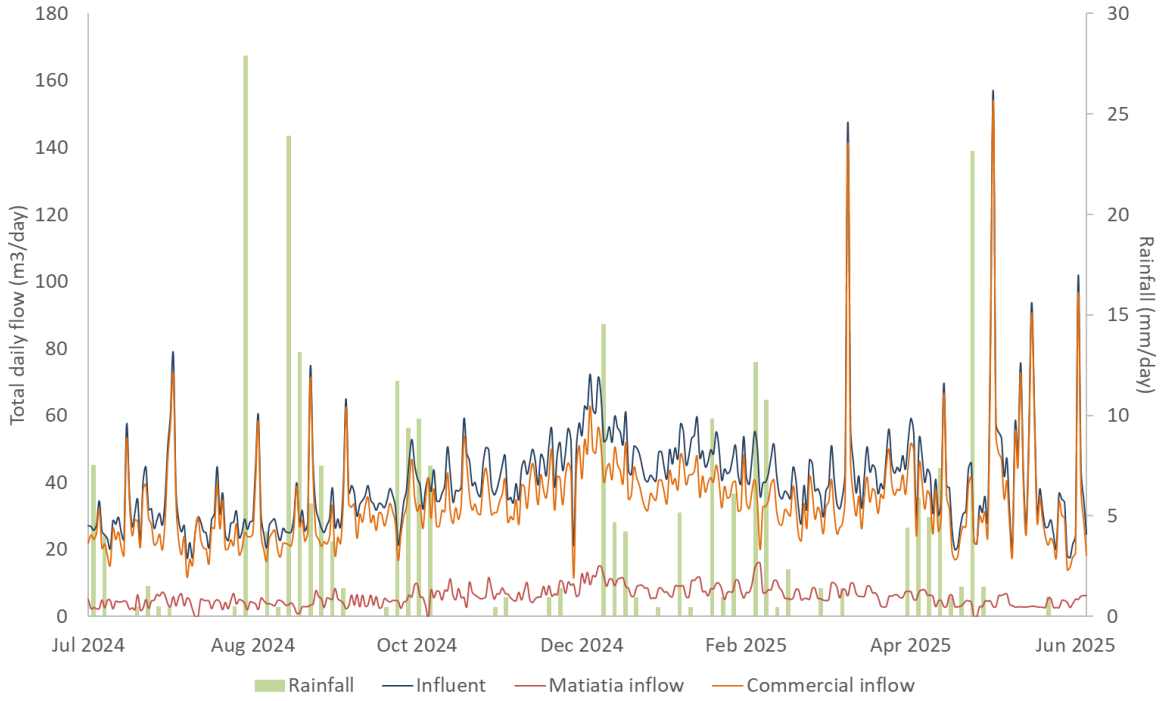

Figure 3-1: Owhanake wastewater inflows and rainfall (2024-2025).

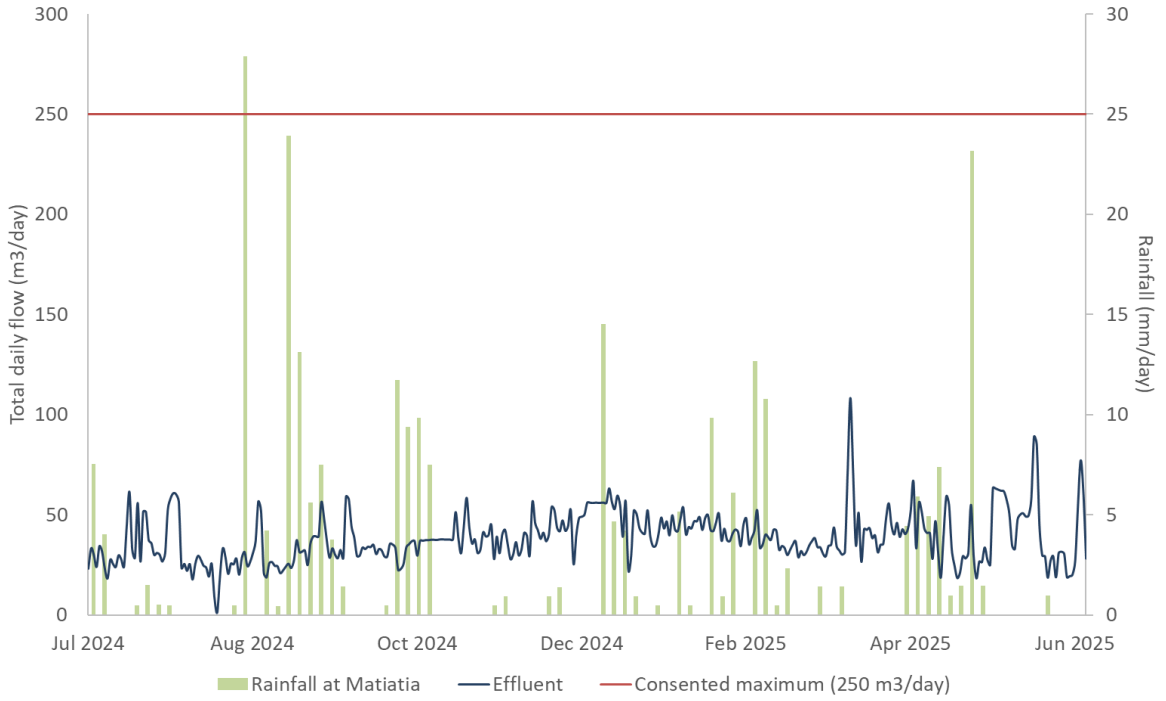

Figure 3-2: Owhanake WWTP effluent flow and rainfall (2024-2025).

3.4 Influent quality

Condition 29(a) requires sampling and testing of the primary treated influent to the WWTP. The influent is tested monthly, but the parameters have no numeric limits. Appendix A summarises monthly inffluent nutrient and contaminant loadings for the WWTP during the 2024–2025 reporting period. Results are expressed as daily mass loadings calculated from measured concentrations and discharge volumes. Parameters include carbonaceous biochemical oxygen demand ($cBOD_5$), oil and

grease (O&G), dissolved reactive phosphorus (DRP), total nitrogen (TN), ammoniacal nitrogen (NHX-N), total phosphorus (TP), and total suspended solids (TSS).

Overall, loadings for most parameters remained low and relatively stable throughout the year. Compared to urban WWTPs, ammoniacal nitrogen and TKN are very high, and phosphorus concentrations are elevated. There are occasional peaks observed for $cBOD_5$, oil and grease, ammoniacal nitrogen, and TSS during December 2024–February 2025, coinciding with higher influent volumes and seasonal process stress.

3.5 Effluent quality

The treated effluent is sampled weekly, immediately prior to the discharge into the natural wetland following the constructed wetland. *E. coli* is required to be sampled following the UV disinfection system (S11) prior to the constructed wetland weekly in summer and fortnightly in winter and must not exceed 50 cfu/100mL. Table 3-4 summarises the results. Raw data is in appendix A.

During the 2024-2025 reporting period, post-disinfection *E. coli* samples were taken weekly. No exceedances at the UV disinfection monitoring point occurred during this period, and the results were typically below the detection limit. As such, the performance and effectiveness of the membranes and the UV disinfection unit is very high.

Auckland Council must be notified if *E. coli* in the wetland (S7) exceeds 126 cfu/100mL between December to March (inclusive). *E. coli* exceeded this threshold on 10, 17, 27 and 31 December 2024 and 11 February 2025. On these occasions, *E. coli* at the UV treatment (the last point of control at the WWTP) were significantly lower than the effluent discharge and wet weather had occurred prior to the samples, indicating the source of the *E. coli* to be of natural cause and unrelated to the plant performance. Each of these dates correlate with recent rainfall in the area, as shown in Figure 3-1. Auckland Council were notified via email of all events. Other elevated *E. coli* results occurred throughout the monitoring period, also attributed to rainfall, however there is no trigger for notification of these in winter.

Several incidents occurred throughout the reporting period which resulted in effluent quality at S7 exceeding consented limits. Exceedances for $cBOD_5$, ammonia and total nitrogen occurred throughout July, August and September 2024, reaching maximums of 23.0 mg/L, 40.1 mg/L and 44.8 mg/L respectively. These were caused by a combination of factors:

- Seasonally colder reactor temperatures, leading to poor nitrification
- Unstable MLSS in the aeration tank
- Low pH values in the aeration tank, inhibiting the bacteria for effective treatment
- Disruption in soda ash supply, resulting in reduced dosing for pH control.

To resolve these issues the following actions were undertaken:

- Adjustments to the pH dosing setpoints
- Completion of additional Mixed Liquor Suspended Solids (MLSS) tests
- Adjustments to the waste activated sludge and return activated sludge setpoints to increase reactor MLSS
- Additional waste activated sludge and return activated sludge control monitoring
- Increased storage for soda ash.

In June 2025, heavy rainfall resulted in high influent volumes at the WWTP. This resulted in a significant drop in loading, affecting the nitrification process. As a result, ammonia and total nitrogen exceeded their consented limits on 17 June (ammonia: 2.3 mg/L) and 24 June (ammonia: 33.0 mg/L and total nitrogen: 35.4 mg/L). This was resolved by reseeding, which occurred on 7 July 2025.

During the reporting period, a number of S7 effluent quality results exceeded the consented limits, however investigations found that these were unrelated to plant processes:

- A suspended solids exceedance of 23.0 mg/L on 3 September 2024 is attributed to the constructed wetland, for which the outlet was flushed to remove sediment build-up, and follow up samples confirmed compliant results.
- On 15 January 2025, total phosphorus was 2.7 mg/L, however WWTP samples post-MBR had a phosphorus concentration of 0.4 mg/L, indicating there were no process issues resulting in elevated phosphorus.
- Exceedances for $cBOD_5$ (60.0 mg/L), ammonia (16.0 mg/L), total nitrogen (17.7 mg/L), total phosphorus (2.7 mg/), total suspended solids (36.6 mg/L) and dissolved oxygen (4.78 mg/L) occurred on 8 April 2025 due to human error; either a sample mix up or an issue with sampling procedures.

Dissolved oxygen results are missing for 27 May and 3 June 2025 due to a faulty meter.

3.5.1 Effluent quality trends

Effluent quality results for forms of nitrogen and phosphorus are summarised in Table 3-5. The average and maximum nutrient loading were higher in 2024-2025 than previous, due to the large number of elevated results, as discussed in Section 3.5.

As plant B was commissioned in 2020, five years of data has now been collected and available for trend analysis, shown in Table 3-5. A Mann-Kendall test was fit for each parameter for the period 1 July 2020 to 30 June 2025 (Table 3-2). Statistical significance of each trend was assessed using the t-test for the slope coefficient, with p-values < 0.05 considered significant. Dissolved reactive phosphorus and ammoniacal nitrogen showed non-significant decreasing trends, total phosphorus also showed a non-significant decreasing trend, while total nitrogen showed a non-significant increasing trend over the period.

When comparing summer (Nov – Apr) to winter (May – Oct) nutrient trends with a Wilcoxon test for the period 2020 to 2025, there are no statistically significant differences between the two seasons (p = 0.224). This is inclusive of the process-related exceedances which occurred in 2024-2025 (Section 3.5).

Table 3-2: Effluent loading linear regression results for nutrient parameters (2020-2025)

Parameter	tau-value	p-value	Significant (p <0.05)
DRP	-0.775	0.065	No
TP	-0.043	0.300	No
NH_X-N	-0.043	0.302	No
TN	0.008	0.854	No

3.6 Air quality

Throughout the monitoring period, all emissions were maintained at the minimum practicable level, and no assessments determined a noxious, dangerous, offensive or objectional effect from operations. Site walkovers were completed once per week and recorded in the log sheets, with no objectional odours at the boundary recorded.

No significant discharge to air occurred in the monitoring period. The WWTP was fully compliant with its air discharge consent requirements.

3.7 Receiving environment monitoring

Condition 29(d) requires monthly sampling and testing of the receiving waters in tributaries, described in Table 3-3.

Table 3-3: Monitoring site locations

Site number	Site description	Coordinates
S1 (W1)	Control site. Puriri Tree Upstream Western Tributary	-36.779092, 174.999069
S7	Wetland Discharge (combined S1, S7, S3 and W6)	-36.779350, 174.999467
S2 (W2)	Downstream Western tributary (combined S1 and S7)	-36.780125, 175.000061
S3 (W3)	Control site. Upper Wetland Upstream Eastern Tributary	-36.780400, 175.000686
S4 (W4)	Stormwater Drain (grate) Downstream Main Tributary (combined S1, S7 and S3)	-36.781369, 174.999419
S6 (W5)	Matiatia Wetland (combined S1, S7, S2, S3 and S4)	-36.781697, 174.997817
S5	Beach outlet (combined S1, S7, S2, S3, S4 and S6)	-36.782527, 174.992659

Appendix A includes monthly monitoring results of receiving water in the tributaries that feed into Matiatia Bay. The monitoring also includes the drain to Matiatia Bay beach foreshore. On some occasions, sample results are not available due to low flows.

In assessing the impacts of plant discharge effluent quality at S7 (Wetland Discharge) on the receiving water environment, test results for each site were averaged and compared.

Table 3-4Table 3-6 shows the comparison, which indicates:

- The *E. coli* levels post UV were generally below the detection limit of 1.6 cfu/100mL.
- There are other contributing factors discharging along the stream flow path. The discharge from the UV disinfection (the last point of control) was consistently lower than the *E. coli* concentrations in the receiving environment.

- Total suspended solid levels are variable throughout the wetland, and higher on average at the control and downstream sites than at the S7 wetland discharge point.
- Ammoniacal nitrogen concentrations was highest on average at the S7 discharge point. This is due to the exceedances discussed in Section 3.5. In previous reporting periods, ammoniacal nitrogen decreased along the flow path, and more resemble upstream concentrations (S1, S3) at the S5 site (beach outlet).
- Total nitrogen and total phosphorus are highest at the effluent discharge point, however downstream results more closely resemble the water quality at the control sites (S1, S3)

In addition to the routine water quality monitoring, three replicates of macroinvertebrate sampling were conducted at all receiving environment monitoring sites on 11 September 2024. The purpose of this sampling was to better understand the impacts of the effluent discharge exceedances (Section 3.5) and is not a requirement of the consent. The results (Table 3-7) indicate:

- Taxa richness is low across all sites, indicating limited diversity of aquatic invertebrates
- The EPT richness are absent or at very low numbers at all sites, therefore showing a lack of sensitive species and dominance by more tolerant taxa
- The MCI values range from 60 to 95, spanning “poor” to “fair” indicating moderate to severe environmental stress
- The QMCI values range more widely, from “poor” to “excellent”. This suggests variation in the relative abundance of sensitive vs. tolerant taxa across sites, even though richness is low
- The control sites only have fair/poor results, indicating widespread poor habitat or catchment stressors, rather than a clear impact solely from the Owhanake WWTP.

Overall, while nutrient concentrations and *E. coli* were elevated at the wetland discharge point, attenuation along the flow path meant that downstream water quality more closely resembled upstream controls, suggesting limited wider effects from the WWTP. Macroinvertebrate results indicate poor ecological health across all sites, including controls, pointing to broader catchment stressors rather than a direct or isolated impact from the plant discharge.

Table 3-4: Effluent compliance summary (2024-2025). Yellow cells show the consented standard, green indicates compliance, and red indicates non-compliance

Parameter	Units	n	Minimum	Average	Median	Maximum	Consented Standards	Compliant
Discharge Volume	m^3/day	365	1.51	38.66	37.15	108.49	250	Yes
E. coli (Post UV) (S11)	cfu/100mL	50	1.60	1.61	1.60	1.70	≤50	Yes
Dissolved Oxygen	mg/L	49	4.78	8.49	8.55	10.72	>5	Yes*
pH		51	6.06	7.25	7.37	8.08	6.0 – 9.0	Yes
$cBOD_5$	mg O_2/L	51	0.50	3.62	1.30	60.0	<10	No
TSS	mg/L	51	1.00	4.28	3.20	36.60	<10	Yes*
NH_X-N	mg/L	51	0.01	4.79	0.13	40.10	<2	No
Total Nitrogen	mg/L	51	0.04	7.30	1.21	44.84	<15	No
Dissolved Reactive Phosphorus	mg/L	51	0.01	0.64	0.49	2.87	-	-
Total Phosphorus (Nov – Apr)	mg/L	26	0.33	0.97	0.72	2.72	<2	Yes*
Total Phosphorus (May – Oct)	mg/L	25	0.08	0.76	0.38	3.48	<4	Yes
E. coli (S7) (Dec – Mar)	cfu/100mL	51	1.60	994.13	30.00	42,000.00	<126	Yes

Note: Any day where the UV sample is not collected is due to low flows through the plant and not being able to collect a UV and Permeate sample.

*Compliance for effluent leaving the WWTP was met, however human error and natural processes within the constructed wetland resulted in elevated sample results above the consented limits. Section 3.5 details these.

Table 3-5: Effluent loading nutrients trend summary (2020-2025)

Parameter	Year	Minimum	Average	Median	Maximum
NH_x-N (kg/day)	**2020-21**	0.001	0.013	0.012	0.025
	2021-22	0.002	0.012	0.011	0.039
	2022-23	0.005	0.065	0.017	0.945
	2023-24	0.001	0.065	0.017	0.945
	2024-25	0.000	0.154	0.006	1.171
Total Nitrogen (kg/day)	**2020-21**	0.018	0.214	0.069	1.250
	2021-22	0.018	0.167	0.179	0.437
	2022-23	0.021	0.308	0.283	1.304
	2023-24	0.040	0.191	0.167	0.764
	2024-25	0.002	0.249	0.046	1.702
Dissolved Reactive Phosphorus (kg/day)	**2020-21**	0.001	0.042	0.042	0.110
	2021-22	0.000	0.015	0.011	0.067
	2022-23	0.000	0.016	0.013	0.066
	2023-24	0.000	0.016	0.013	0.066
	2024-25	0.000	0.026	0.020	0.162
Total Phosphorus (kg/day)	**2020-21**	0.001	0.047	0.044	0.129
	2021-22	0.006	0.017	0.011	0.084
	2022-23	0.001	0.019	0.016	0.074
	2023-24	0.001	0.019	0.016	0.074
	2024-25	0.002	0.034	0.027	0.197

Table 3-6: Changes in mean water quality downstream of the Owhanake WWTP

Parameter	Unit	S11 Post UV Tap	S7 Wetland Discharge	S1 Control: Puriri Tree Upstream Western tributary	S2 Downstream Western tributary	S3 Control Upper Wetland Upstream Eastern tributary	S4 Stormwater Drain (Gate) Downstream main tributary	S6 Matiatia Wetland	S5 Stream Beach Outlet
BOD	mg O_2/L	N/A	6.7	8.4	2.4	1.6	1.2	2.6	2.6
TSS	mg/L	N/A	5.5	15.8	23.6	21.2	53.7	72.5	8.9
NH_X-N	mg/L	N/A	5.2	1.4	3.1	0.1	0.0	0.2	0.2
TN	mg/L	N/A	7.0	4.3	5.3	0.9	0.9	1.2	0.7
TP	mg/L	N/A	1.1	0.4	0.5	0.2	0.6	0.4	0.4
DRP	mg/L	N/A	0.7	0.1	0.4	0.0	0.3	0.2	0.2
E. coli	cfu/100 mL	2.15	472.1	11096.5	1827.5	1140.3	1171.2	961.0	3874.2

Note: All results are mean values. Raw data in Appendix A.

Table 3-7: Summary of macroinvertebrate indices downstream of the Owhanake WWTP (11 September 2024). Replicates are averaged per site.

Index	S7 Wetland Discharge	S1 Control: Puriri Tree Upstream Western tributary	S2 Downstream Western tributary	S3 Control Upper Wetland Upstream Eastern tributary	S4 Stormwater Drain (Gate) Downstream main tributary	S6 Matiatia Wetland	S5 Stream Beach Outlet
Taxa richness	3.7	3.7	3.3	4.0	6.3	4.3	6.3
EPT richness	0.0	0.0	0.0	0.0	0.0	0.0	0.3
MCI	78.0	87.3	91.3	65.3	79.0	60.0	94.7
MCI quality class[1]	Poor	Fair	Fair	Poor	Poor	Poor	Fair
QMCI	2.3	5.7	4.0	2.7	4.0	2.0	6.0
QMCI quality class[2]	Poor	Good	Fair	Poor	Fair	Poor	Excellent

[1] Stark JD, 1985: A Macroinvertebrate Community Index of Water Quality for Stony Streams. Water and Soil miscellaneous publication 87: 53p.
[2] Stark JD, 1998: SQMCI: A biotic index for freshwater macroinvertebrate coded-abundance data. New Zealand Journal of Marine and Freshwater Research 32: 55-66.

3.7.1 Sediment quality

Condition 29c(iv) requires that once Plant B has been commissioned, one sample per year of the surficial sediment in the unnamed tributary approximately 10 m downstream of the outfall structure shall be analysed for dissolved and total recoverable trace metals.

The test was done in May 2025 and Table 3-8 lists the results. The results for all metals except lead were below default ANZG (2018[3]) trigger values for sediment toxicity. Results below these trigger values indicate there is a low risk of unacceptable effects occurring and can be used to protect aquatic ecosystems. In previous reporting periods, lead has remained below the detection limit, except for the two most recent tests in May 2024 and May 2025. Further annual monitoring will assist in identifying any potential trends on this matter.

Table 3-8: Sediment results for 2024-2025

Parameter	Units	Concentration	Default trigger value
Arsenic (Recoverable Dry Wt.)	mg/kg	19	20
Cadmium (Recoverable Dry Wt.)	mg/kg	0.1	1.5
Chromium (Recoverable Dry Wt.)	mg/kg	22	80
Copper (Recoverable Dry Wt.)	mg/kg	21	65
Lead (Recoverable Dry Wt.)	mg/kg	61	50
Mercury (Recoverable Dry Wt.)	mg/kg	0.09	0.15
Nickel (Recoverable Dry Wt.)	mg/kg	7.9	21
Zinc (Recoverable Dry Wt.)	mg/kg	71	200

3.8 Complaints and incidents

There were no notable incidents at the Owhanake WWTP between July 2024 and June 2025. The WWTP did not receive any complaints related to its operation or maintenance, including air quality or odour.

[3] https://www.waterquality.gov.au/anz-guidelines/guideline-values/default/sediment-quality-toxicants

4 EFFLUENT REUSE INVESTIGATION

Condition 40 requires investigations into the beneficial non-potable reuse of the treated wastewater every two years. The plant currently reuses some effluent as part of onsite operations. Several options for further reuse were identified as opportunities through internal discussions, the 2023 Aurecon reuse report (2022-2023 Owhanake WWTP annual report), and consultation with the Waiheke Local Board (2023-2024 Owhanake WWTP annual report).

During the reporting period, preliminary investigations were carried out into the potential reuse of effluent for firefighting and roadworks. This work included scoping available infrastructure space within the plant property to assess the feasibility of third-party collection, while also identifying the overall space constraints on site. Additional sampling of the influent and effluent was completed between August 2024 and June 2025, a recommended action of the Aurecon reuse report. In 2025-2026, analysis of these parameters will be completed to compare with international re-use regulations and provide vital data for evaluating the suitability of wastewater for various reuse applications and included in the next annual report.

5 CONCLUSION

The 2024-2025 annual report for the Owhanake WWTP demonstrates that the plant has mostly performed well, with effective wastewater treatment and compliance with most consent conditions. However, some challenges were encountered, notably exceedances for $cBOD_5$, ammonia and total nitrogen occurred throughout July, August and September 2024, and June 2025. These issues were addressed soon after they occurred. A number of additional S7 effluent quality results exceeded the consented limits, however investigations found that these were unrelated to plant processes.

Monitoring of the receiving environment indicates that nutrients were on average, higher at the discharge point, and other physiochemical parameters were variable throughout the Matiatia catchment. Macroinvertebrate results indicated poor ecological health across all sites, including controls, consistent with broader catchment stressors rather than direct effects of the WWTP alone.

Air discharge conditions were fully met, and no complaints or significant incidents were reported during the period. Appendix B lists a condition-by-condition assessment of compliance for the WWTP. Across all consents, the WWTP was assessed as **Category 2** in 2024-2025 due to exceedances in the effluent discharge quality.

Appendix A. Supplementary data

Influent monitoring data

Date	$cBOD_5$	NO_x-N	O&G	DRP	TKN	TN	NH_x-N	TP	TSS
	mg O_2/L	mg/L	mg/L	mg/L P	mg/L	mg/L	mg/L N	mg/L P	mg/L
9/07/2024	180	2.20	27.6	17.6	221	223.2	190	17.8	75
13/08/2024	180	0.87	46.0	12.9	123	123.9	97	15.9	160
10/09/2024	160	1.10	26.0	12.9	148	149.1	130	14.4	95
8/10/2024	150	0.50	27.0	10.3	94	94.8	90	13.5	84
12/11/2024	140	0.58	34.6	12.0	118	118.6	94	15.6	98
10/12/2024	230	0.64	56.0	9.9	86	86.7	80	12.9	158
14/01/2025	230	0.02	47.4	11.2	113	113.02	100	13.8	151
11/02/2025	200	0.02	110.0	10.7	96	96.8	91	15.2	130
11/03/2025	210	0.023	40.3	12.7	135	135.0	120	18.9	152
8/04/2025	190	0.02	31.0	9.8	67	67.6	66	12.3	150
13/05/2025	160	0.80	25.6	12.4	110	110.8	87	14.5	151
10/06/2025	100	0.02	31.0	5.2	49	49.0	43	7.3	47

Influent loading

Date	$cBOD_5$	O&G	DRP	TN	NH_X-N	Total P	TSS
	kg/day	kg/day	kg/day	kg/day	kg/day	kg/day	kg/day
9/07/2024	4.39	0.67	0.43	5.44	4.63	0.43	1.83
13/08/2024	4.47	1.14	0.32	3.08	2.43	0.39	3.97
10/09/2024	4.20	0.68	0.34	3.91	3.41	0.38	2.49
8/10/2024	5.02	0.90	0.34	3.17	3.01	0.45	2.81
12/11/2024	4.78	1.18	0.41	4.05	3.21	0.53	3.35
10/12/2024	9.03	2.20	0.39	3.41	3.14	0.51	6.21
14/01/2025	10.03	2.07	0.49	4.93	4.36	0.60	6.58
11/02/2025	8.94	4.92	0.48	4.33	4.07	0.68	5.81
11/03/2025	7.37	1.41	0.45	4.74	4.21	0.66	5.34
8/04/2025	7.96	1.30	0.41	2.83	2.77	0.52	6.29
13/05/2025	3.20	0.51	0.25	2.22	1.74	0.29	3.02
10/06/2025	9.37	2.90	0.49	4.59	4.03	0.68	4.40

Effluent monitoring data

	S7 Wetland discharge								Post UV Tap		
Date	cBOD	NH_X-N	NO_X-N	DRP	TP	TSS	TN	E. coli	E. coli	DO	pH
	mg O_2/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100mL	cfu/100mL	mg O_2/L	
2-Jul-24	2.70	6.46	5.19	0.21	0.20	1.00	11.56	140.0	1.6	9.74	7.78
9-Jul-24	3.20	12.80	11.00	0.17	0.21	1.00	23.40	1.6	1.6	10.72	6.93
16-Jul-24	2.10	17.90	9.62	0.23	0.27	1.60	27.62	58.0	1.6	10.23	7.12
23-Jul-24	1.60	0.53	10.00	0.23	0.25	4.60	11.42	15.0	1.6	9.20	7.47
30-Jul-24	2.70	8.46	4.40	0.21	0.31	3.40	12.72	74.0	1.6	8.98	7.38
6-Aug-24	23.00	19.70	0.02	0.01	0.08	5.60	18.92	1.6	1.6	9.26	7.01
13-Aug-24	2.30	27.40	0.23	0.10	0.35	3.60	27.63	4.9	1.6	8.92	7.04
20-Aug-24	2.50	40.10	0.44	0.25	0.30	3.20	44.84	40.0	1.6	10.16	6.63
27-Aug-24	6.00	32.00	0.89	0.28	0.86	10.00	32.49	90.0	1.6	8.67	6.96
3-Sept-24	18.00	12.00	0.02	0.05	0.67	23.00	12.32	84.0	1.6	7.48	6.76
10-Sept-24	6.00	4.20	0.63	0.45	1.37	4.00	5.47	9.8	1.6	8.81	6.06
17-Sept-24	1.60	1.20	39.00	0.69	1.58	1.00	41.31	34.0	-	7.12	6.99
24-Sept-24	1.30	0.36	3.30	2.87	3.48	1.00	4.46	20.0	1.6	9.07	6.14
1-Oct-24	1.70	0.33	0.26	1.60	1.84	1.00	1.28	1.6	1.6	8.92	6.46
8-Oct-24	1.10	0.07	0.80	1.31	1.60	4.80	1.76	56.0	1.6	7.66	6.33
15-Oct-24	2.10	0.20	0.67	1.34	1.42	2.20	1.67	23.0	1.6	9.4	6.23
29-Oct-24	0.60	0.19	0.14	0.58	0.70	1.40	1.06	38.0	1.6	8.84	6.47
5-Nov-24	0.56	0.19	0.10	0.57	0.65	1.00	1.02	4.9	1.6	8.85	6.58
12-Nov-24	0.85	0.14	0.10	0.55	0.79	3.40	1.00	4.9	1.6	8.06	6.73
19-Nov-24	0.55	0.13	0.07	1.05	1.33	3.60	0.81	58.0	1.6	8.75	7.25
26-Nov-24	0.57	0.10	0.12	1.34	1.70	1.00	0.99	11.0	1.6	9.42	7.47

	S7 Wetland discharge								Post UV Tap		
Date	**cBOD**	**NH_X-N**	**NO_X-N**	**DRP**	**TP**	**TSS**	**TN**	**E. coli**	**E. coli**	**DO**	**pH**
	mg O_2/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100mL	cfu/100mL	mg O_2/L	
3-Dec-24	0.76	0.14	0.07	1.12	1.22	4.40	0.78	15.0	1.6	8.38	7.26
10-Dec-24	1.40	0.09	0.07	0.80	0.97	2.00	0.81	4000.0	1.6	7.41	7.24
17-Dec-24	0.64	0.11	0.08	0.70	0.85	3.00	0.84	840.0	1.6	7.71	7.24
24-Dec-24	1.00	0.10	0.03	0.58	0.71	1.00	0.74	270.0	1.6	7.87	7.34
31-Dec-24	0.51	0.09	0.04	0.52	0.69	3.20	0.77	620.0	1.6	7.78	7.26
7-Jan-25	0.51	0.11	0.03	0.47	0.59	7.80	0.83	13.0	1.6	8.06	7.22
15-Jan-25	2.30	1.40	0.15	2.54	2.70	3.80	2.34	11.0	1.7	6.3	7.31
21-Jan-25	1.30	0.12	0.08	0.59	0.73	6.80	0.82	15.0	1.6	8.8	7.88
28-Jan-25	0.59	0.09	0.04	0.53	0.69	2.20	0.04	54.0	1.6	8.8	7.65
4-Feb-25	1.10	0.12	0.09	0.49	0.64	5.00	0.89	42.0	1.6	8.18	7.4
11-Feb-25	0.50	0.06	0.29	0.43	0.65	1.60	0.88	1200.0	1.6	8.28	7.94
18-Feb-25	2.00	0.03	0.15	0.38	0.63	6.80	0.74	64.0	1.6	7.88	7.45
25-Feb-25	0.50	0.06	0.86	0.45	0.50	2.00	1.50	30.0	1.6	8.21	7.39
4-Mar-25	0.50	0.03	0.81	0.41	0.59	4.40	1.57	6.5	1.6	8.51	7.52
11-Mar-25	0.50	0.02	0.59	0.52	0.64	3.50	1.20	4.9	1.7	7.95	8.05
18-Mar-25	0.92	0.04	0.71	0.66	0.75	3.60	1.36	26.0	1.6	8.45	7.76
25-Mar-25	0.99	0.03	0.56	1.02	1.34	4.00	1.20	21.0	1.7	8.18	7.49
1-Apr-25	0.55	0.02	0.75	1.14	1.42	1.00	1.43	9.8	1.6	8.9	8.08
8-Apr-25	60.00	16.00	0.02	1.18	2.72	36.60	0.02	320.0	1.6	4.78	7.4
15-Apr-25	2.10	0.44	0.09	0.54	0.78	3.60	0.97	-	1.6	7.72	7.98
22-Apr-25	0.50	0.10	0.06	0.43	0.59	6.00	0.06	44.0	1.6	7.89	7.39
29-Apr-25	0.55	0.06	0.11	0.31	0.33	3.20	0.64	62.0	1.6	8.04	7.37

	S7 Wetland discharge								Post UV Tap		
Date	**cBOD**	**NH_X-N**	**NO_X-N**	**DRP**	**TP**	**TSS**	**TN**	**E. coli**	**E. coli**	**DO**	**pH**
	mg O_2/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100mL	cfu/100mL	mg O_2/L	
6-May-25	6.10	0.03	0.57	0.31	0.38	1.00	1.21	20.0	1.6	9	7.62
13-May-25	0.70	0.03	0.11	0.29	0.43	1.00	0.72	34.0	1.6	8.43	7.52
20-May-25	0.74	0.01	0.64	0.26	0.34	1.00	1.14	34.0	1.7	8.93	7.48
27-May-25	5.70	5.00	1.21	0.85	1.09	12.00	7.21	42000.0	1.7	-	7.38
3-Jun-25	4.70	0.10	0.13	0.37	0.40	1.00	0.66	92.0	1.7	-	7.61
10-Jun-25	2.00	0.03	0.18	0.27	0.28	1.00	0.70	18.0	1.6	8.55	7.32
17-Jun-25	0.54	2.30	0.52	0.35	0.38	3.60	3.32	28.0	1.7	9.41	7.5
24-Jun-25	3.60	33.00	1.41	0.19	0.22	1.00	35.41	11.0	1.6	9.57	7.71

Any day where the UV sample is not collected is due to low flows through the plant and not being able to collect a UV and Permeate sample.

Receiving environment water quality data

S1(W1) Puriri Tree (upstream western tributary)

Date	cBOD	NH_X-N	NO_2-N	NO_3-N	NO_x-N	DRP	TP	TSS	TKN	TN	E. coli
	mg O_2/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100mL
9/07/2024	0.9	0.40	0.02	0.87	7.20	0.013	0.02	6.4	0.46	7.66	100
13/08/2024	1.0	0.40	0.02	0.98	3.40	0.015	0.02	2.4	0.54	3.94	10
10/09/2024	0.9	0.04	0.02	0.94	2.40	0.012	0.02	1.0	0.36	2.76	18
8/10/2024	0.8	0.02	0.02	0.75	0.16	0.013	0.02	4.6	0.40	0.56	120
12/11/2024	6.0	0.02	0.02	6.00	0.17	0.020	0.59	5.2	0.92	1.09	2200
10/12/2024	13.0	0.16	0.02	13.00	0.29	0.051	0.39	17.0	1.91	2.20	71000
14/01/2025	28.0	0.76	0.02	28.00	0.94	0.084	0.81	20.0	5.18	6.12	18000
11/02/2025	24.0	4.40	0.02	24.00	0.15	0.118	0.16	66.8	9.95	10.10	19000
11/03/2025	21.0	9.50	0.02	21.00	0.14	0.235	2.11	40.4	13.80	13.94	20000
8/04/2025	3.7	0.82	0.02	3.70	0.05	0.190	0.46	15.0	1.63	1.68	2000
13/05/2025	0.9	0.06	0.02	0.92	0.09	0.022	0.07	2.0	0.44	0.53	320
10/06/2025	0.6	0.02	0.02	0.60	0.20	0.009	0.03	9.0	0.46	0.66	390

S2 Lower Wetland

Date	cBOD	NH_X-N	NO_2-N	NO_3-N	NO_x-N	DRP	TP	TSS	TKN	TN	E. coli
	mg O_2/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100mL
9/07/2024	1.1	11.60	0.33	1.10	7.20	0.082	0.11	48.7	11.40	18.60	130
13/08/2024	3.4	18.40	0.33	3.40	3.40	0.030	0.07	18.0	19.20	22.60	250
10/09/2024	0.8	0.03	0.02	0.77	2.40	0.216	0.22	1.4	0.71	3.11	310
8/10/2024	0.8	0.02	0.02	0.75	0.16	0.205	0.20	1.8	0.43	0.59	120
12/11/2024	0.7	0.02	0.02	0.68	0.17	0.480	0.60	3.6	0.82	0.99	2000

S2 Lower Wetland

Date	cBOD	NH_X-N	NO_2-N	NO_3-N	NO_x-N	DRP	TP	TSS	TKN	TN	E. coli
	mg O_2/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100mL
10/12/2024	1.3	0.05	0.02	1.30	0.29	0.541	0.68	30.6	0.93	1.22	9600
14/01/2025	1.2	0.03	0.02	1.20	0.94	1.770	1.89	8.4	0.96	1.90	590
11/02/2025	0.5	0.05	0.02	0.50	0.15	0.421	0.43	3.2	0.66	0.81	3900
11/03/2025	5.3	0.17	0.02	5.30	0.14	0.222	0.55	124.0	1.22	1.36	3000
8/04/2025	13.0	6.70	0.02	13.00	0.05	0.291	1.03	35.2	10.20	10.25	1600
13/05/2025	0.8	0.03	0.02	0.83	0.09	0.166	0.28	3.6	0.99	1.08	230
10/06/2025	0.6	0.02	0.02	0.55	0.20	0.106	0.13	5.0	0.47	0.67	200

S3 (W3) Upper Wetland (upstream eastern tributary)

Date	cBOD	NH_X-N	NO_2-N	NO_3-N	NO_x-N	DRP	TP	TSS	TKN	TN	E. coli
	mg O_2/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100mL
9/07/2024	1.3	0.18	0.02	1.30	0.21	0.013	0.14	8.0	0.41	0.62	160
13/08/2024	1.3	0.04	0.02	1.30	0.13	0.019	0.21	17.0	1.04	1.17	160
10/09/2024	2.8	0.04	0.02	2.80	0.17	0.024	0.26	54.0	0.96	1.13	1500
8/10/2024	1.1	0.02	0.02	1.10	0.10	0.038	0.08	6.8	0.69	0.79	590
12/11/2024	2.6	0.04	0.02	2.60	0.20	0.051	0.21	14.0	0.78	0.98	320
10/12/2024	2.2	0.02	0.02	2.20	0.09	0.031	0.24	38.4	0.79	0.87	5700
14/01/2025	2.0	0.27	0.02	2.00	0.30	0.044	0.26	37.2	0.81	1.11	63
11/02/2025	1.8	0.05	0.02	1.80	0.27	0.040	0.23	35.2	0.52	0.79	2100
11/03/2025	1.1	0.03	0.02	1.10	0.30	0.018	0.24	18.0	0.51	0.81	80
8/04/2025	1.0	0.11	0.02	0.96	0.17	0.037	0.11	12.0	0.47	0.64	550
13/05/2025	0.9	0.07	0.02	0.92	0.12	0.025	0.17	11.0	0.63	0.75	360

S3 (W3) Upper Wetland (upstream eastern tributary)											
Date	cBOD	NH_X-N	NO_2-N	NO_3-N	NO_x-N	DRP	TP	TSS	TKN	TN	E. coli
	mg O_2/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100mL
10/06/2025	0.6	0.01	0.02	0.60	0.05	0.012	0.05	2.4	0.58	0.63	2100

S4 (W4) Stormwater Drain (Gate) - Downstream main tributary										
Date	cBOD	NH_X-N	NO_3-N	NO_x-N	DRP	TP	TSS	TKN	TN	E. coli
	mg O_2/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100mL
9/07/2024	0.8	0.18	0.83	0.53	0.121	0.13	6.8	0.74	1.27	330
13/08/2024	0.7	0.06	0.74	0.64	0.137	0.18	8.4	0.67	1.31	84
10/09/2024	1.1	0.02	1.10	0.10	0.176	0.21	10.0	0.52	0.61	420
8/10/2024	0.6	0.02	0.61	0.04	0.189	0.24	6.0	0.63	0.68	510
12/11/2024	1.1	0.03	1.10	0.03	0.239	1.01	45.0	0.86	0.88	580
10/12/2024	1.2	0.02	1.20	0.03	0.337	0.53	9.8	0.73	0.75	3200
14/01/2025	2.0	0.02	2.00	0.02	0.352	0.66	45.0	0.81	0.83	2000
11/02/2025	1.3	0.03	1.30	0.02	0.426	1.14	72.0	0.69	0.71	2400
11/03/2025	2.5	0.03	2.50	0.02	0.350	1.82	340.0	1.38	1.40	270
8/04/2025	1.2	0.02	1.20	0.02	0.435	1.12	83.0	0.80	0.82	2000
13/05/2025	0.7	0.01	0.71	0.02	0.237	0.40	15.0	0.51	0.53	1800
10/06/2025	1.0	0.01	1.00	0.05	0.141	0.18	3.4	0.44	0.49	460

W6 Matiatia Wetland									
Date	cBOD	NH_X-N	NO_x-N	DRP	TP	TSS	TKN	TN	E. coli
	mg O_2/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100mL
9/07/2024	1.1	0.40	0.23	0.049	0.23	30.0	0.75	0.98	84
13/08/2024	2.8	0.88	0.16	0.164	0.71	28.0	1.53	1.69	7
10/09/2024	1.4	0.11	0.14	0.103	0.22	23.0	0.64	0.78	310
8/10/2024	2.4	0.12	0.07	0.112	0.61	110.0	1.57	1.64	1000
12/11/2024	1.6	0.08	0.03	0.124	0.24	51.0	0.66	0.68	410
10/12/2024	2.4	0.06	0.06	0.135	0.22	25.6	0.69	0.75	3900
14/01/2025	1.6	0.06	0.02	0.113	0.43	143.0	1.00	1.02	440
11/02/2025	6.2	0.13	0.02	0.170	0.52	79.6	1.04	1.06	2500
11/03/2025	-	-	-	-	-	-	-	-	-
8/04/2025	5.3	0.46	0.02	0.535	0.76	92.0	1.39	1.41	1100
13/05/2025	3.4	0.23	0.05	0.100	0.84	209.0	2.00	2.05	560
10/06/2025	0.8	0.04	0.14	0.070	0.14	6.4	0.54	0.68	260

S5 (W7) Stream (Beach Outlet)									
Date	cBOD	NH_X-N	NO_x-N	DRP	TP	TSS	TKN	TN	E. coli
	mg O_2/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100mL
9/07/2024	1.1	0.40	0.04	0.049	0.23	1.6	0.40	0.44	410
13/08/2024	2.8	0.88	0.06	0.164	0.71	2.6	0.59	0.65	90
10/09/2024	1.4	0.11	0.02	0.103	0.22	10.0	0.51	0.54	1900
8/10/2024	2.4	0.12	0.03	0.112	0.61	4.4	0.71	0.74	1200
12/11/2024	1.6	0.08	0.02	0.124	0.24	12.0	0.68	0.70	710
10/12/2024	2.4	0.06	0.04	0.135	0.22	7.4	0.84	0.88	8800

S5 (W7) Stream (Beach Outlet)									
Date	cBOD	NH_X-N	NO_x-N	DRP	TP	TSS	TKN	TN	E. coli
	mg O_2/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100mL
14/01/2025	1.6	0.06	0.00	0.113	0.43	18.0	1.30	1.30	12000
11/02/2025	6.2	0.13	0.02	0.170	0.52	13.0	0.73	0.75	7100
11/03/2025	-	-	0.02	-	-	7.0	-	-	280
8/04/2025	5.3	0.46	0.03	0.535	0.76	13.0	0.78	0.81	6500
13/05/2025	3.4	0.23	0.02	0.100	0.84	4.0	0.48	0.50	5500
10/06/2025	0.8	0.04	0.09	0.070	0.14	14.0	0.78	0.87	2000

Appendix B. Compliance assessment

Discharge to water compliance assessment (37282)

Condition Number	Consent Condition Owhanake Discharge to Water (#37282)	Compliance Rating	Comments
01	The discharges of contaminants shall be carried out in accordance with the plans and information submitted with the application, including: SEE CONSENT PDF FOR LIST OF PLANS AND REQUIREMENTS	1	Compliant.
02	That Plant B is to be installed and fully operational before annual average dry weather flows exceed 35 m3 per day.	1	The Plant B has been installed and fully operational from January 2020.
03	Notwithstanding the provisions of condition 1 of this resource consent, the Consent Holder may submit for approval of The Manager an alternative biological nutrient removal wastewater treatment plant and alternative disinfection system to those described in the Applicant's proposal for application 27 4 73 and other supporting documents.	NE	Not triggered.
04	The consent holder shall ensure that the maximum discharge volume does not exceed the following limits: a) Plant A: 80 cubic metres per day b) Plant B: 250 cubic metres per day.	1	Compliant.
05	That upon considering key new treatment system components for the upgrade of the plant capacity the Consent Holder shall specifically bear in mind and take proper account of the potential future requirement to reduce phosphorus concentrations in the treated wastewater prior to discharge.	NE	Not triggered.
06A	That prior to the commissioning of the Plant B, the Consent Holder shall provide to the Manager's satisfaction the design details of the selected disinfection system equipment. The Consent Holder shall also provide to the Manager information from a suitably qualified wastewater engineer that verifies that the disinfection methodology, along with specified maintenance and monitoring procedures, will achieve a final effluent quality that will comply with the discharge standards specified in Conditions 34 and 35 of this consent.	NE	Not triggered.
06B	That if a UV disinfection system is used then the minimum level of disinfection shall be such that the wastewater receives a minimum UV dose, defined as the 10 minute average received UV light dose, of 45 milli-Watt seconds per square centimetre (mWs/cm^2) prior to it entering the constructed wastewater wetland	1	Compliant.
06C	That if an alternative disinfection system is used instead of UV, then the Consent Holder shall provide evidence to The Manager's satisfaction that the effectiveness of any such alternative system can be continuously monitored.	NE	Not triggered.
06D	That the disinfection system used shall meet at least the discharge quality limit in condition 36.	NE	Not triggered.

Condition Number	Consent Condition Owhanake Discharge to Water (#37282)	Compliance Rating	Comments
07	That prior to the commissioning of Plant B, the Consent Holder shall install an upgraded UV disinfection system approved under condition 9 below.	1	A new UV unit replacement was installed in 2014.
08	That prior to the commissioning of Plant B, the Consent Holder shall install outfall structures in the Matiatia wetland to disperse the wastewater discharge flow and to ensure that the discharge does not result in flooding or erosion effects on the respective tributaries. The outfall structures to be used shall be designed to improve wastewater distribution within the wetland, in particular by the use of multiple discharge points rather than a single discharge point on each structure. One of the structures shall be installed approximately 1Om downstream of the existing outfall pipe. The design and installation of the structures shall be submitted to the Manager for approval prior to construction and once constructed the Consent Holder shall provide certification of the works to the Manager.	1	Outfall structure compliant in design.
09	The design and installation of all new system components shall be carried out under the supervision of a chartered professional engineer or other appropriately qualified person experienced in the design and installation of wastewater treatment systems. The supervising engineer/person shall inspect all the new works (as they are completed), and shall certify in writing to the Manager that all additional components of the wastewater treatment system have been designed, inspected and installed in accordance with standard engineering practice and with the plans provided pursuant to condition 1 and any other plans or specifications required by the conditions of consent. This certification shall be carried out within three months of the installation of Plant B.	NE	Compliant.
10	Within three months of the commissioning of Plant 8 the consent holder shall submit an updated 'as-built' general plant layout plan for the upgraded treatment system to the Council with the certification required by condition 9, showing on the plan the location of all existing and new key components of the treatment system.	NE	Compliant.
11	That the Consent Holder shall ensure that all septic tanks connected to the reticulation system are of appropriate capacity, are fitted with outlet filters, and are installed and maintained to prevent ingress of stormwater.	1	Completed.
12	That the Consent Holder shall provide to the Manager, via the OWTP Annual Monitoring Report required by Condition 39, an updated summary of current and confirmed proposed new connections to the treatment plant sewerage system.	1	No new connections.
13	That the Consent Holder shall not accept any new connections to the treatment system where the primary treatment system at the source does not comply with the design and maintenance requirements for septic tank and outlet filters as specified in the Auckland Regional Council Technical Publication 58 "On-site Wastewater Systems: Design and Management Manual" (TP58, Third Edition 2004) as current at the time of connection or equivalent as approved in writing by the Manager.	1	Compliant.

Condition Number	Consent Condition Owhanake Discharge to Water (#37282)	Compliance Rating	Comments
14	That no trade, industrial, non-domestic or other strong (non-domestic type) wastes shall be accepted into the wastewater treatment plant without the written approval of the Manager. In this consent, "trade wastes"1 refers to anything which is discharged from trade premises as defined in Section 489 of the Local Government Act 1974.	1	Compliant.
15	That all primary treatment systems from which effluent is reticulated to the treatment plant shall be fitted with an effluent outlet filter that retains any particle of 3mm diameter or greater within the septic tank on the site that the wastewater is generated.	1	No new connections. Auckland Council is responsible for requirements relating to grease traps etc.
16	That the Consent Holder shall fence and clearly signpost the treatment plant and discharge points to discourage access by unauthorised personnel. The details of such action shall be agreed with the local Medical Officer of Health and submitted for approval by the Manager, prior to the exercising of this consent.	1	Fence and signposts in place.
17	That this resource consent is granted by the Auckland Council subject to its servants or agents being permitted access to the relevant parts of the property at all reasonable times for the purpose of carrying out inspections, surveys, investigations, tests, measurements or taking samples.	1	Compliant. Most recent Compliance Officer inspection completed 15 October 2024.
18	The Consent Holder shall ensure that 24 hours a day, seven days a week electronic monitoring systems are installed and maintained to operate in the event of any plant failure.	1	Electronic monitoring system in place.
19	The Consent Holder shall ensure that the system is designed and maintained to ensure that wastewater can be retained within the system, above the alarm level, without overflow for a period of at least 24 hours and in accordance with the provisions in the Management Plan.	1	As designed.
20	That a suitable area shall be reserved for the extension of the constructed wetland, should this become necessary and the extent of this reserve shall be specified in the Management Plan.	1	Area reserved.
21	That the Consent Holder shall install and maintain signage along the upper and main sections of Matiatia Wetland, Matiatia stream and Matiatia Beach foreshore. The signage shall advise of the poor stream water quality and the sources potentially contributing to that poor quality. The signs shall be erected prior to the exercise of this consent, in such positions as to clearly notify users of the wetland and of the associated public walkway of the proximity of the effluent discharge and shall provide appropriate public health advice, as approved by the Medical Officer of Health, regarding the use of the wetland for recreation and gathering of food for consumption.	1	Signage in place.

Condition Number	Consent Condition Owhanake Discharge to Water (#37282)	Compliance Rating	Comments
22	That in the event of wastewater being discharged from the treatment plant that has not received effective disinfection, the Consent Holder shall immediately supplement the signage required by condition 21 above with signs specifically advising of system malfunction and warning against collection of shellfish or contact recreation in the vicinity of the stream outlet, as a consequence of the discharge of poorly treated wastewater. Signage shall be maintained until at least 24 hours after such time that monitoring confirms compliance with the discharge quality consent conditions.	1	Not required. The condition trigger did not occur.
23	That the wording, language(s) and locations of all signs shall be to the satisfaction of the Manager, in consultation with the Medical Officer of Health.	1	Signage approved.
24	That the Consent Holder shall desludge the plant as required and that the sludge shall be thickened according to the standard in the Management Plan approved by the Manager. Waste sludge shall be disposed of off-site to an appropriate licensed waste treatment and disposal facility, in a manner that ensures that the sludge or runoff from the sludge does not enter any natural waters.	1	Compliant.
25	The consent holder shall prepare a Management Plan for the wastewater treatment and discharge system to enable compliance with the conditions of this consent to ensure that any adverse effects on the environment are minimised. The Management Plan shall be in accordance with the conditions of this consent and shall cover the following: SEE CONSENT PDF FOR LIST OF REQUIREMENTS	1	O&M manual dated February 2020 in place.
26	The consent holder shall comply with the requirements of the Management Plan required by condition 25 once it has been approved. All subsequent significant updates to the plan throughout the term of this consent shall be submitted to the Manager for review.	1	O&M manual dated February 2020 in place.
27	That the Consent Holder shall continuously measure the wastewater flow into and out of the wastewater treatment plant. Meters shall be located to enable separate measures of the wastewater flows from the Oneroa commercial and residential area pump station(s) and from the Matiatia Wharf pump station(s), for flows from the wharf public toilets and from the WIL development and for the treated wastewater flow discharged to the natural wetland. Flow volumes shall be measured with meters capable of measuring to an accuracy of plus or minus 5 %. Where pump hours are used to meter flows, the pump flow time shall be regularly calibrated to consistently ensure an accuracy of plus or minus 5 % in achieved. The meters shall be installed in accordance with the manufacturer's specifications and shall be maintained in good working order at all times.	1	Ongoing. Plant influent & effluent meters were calibrated in the 2024-2025 reporting year.
28	That all wastewater flows both into and out of the wastewater treatment plant are to be logged automatically. This data is to be recorded at such a frequency so as to ensure that the diurnal variations in wastewater flows can be determined and a daily 24 hour flow total determined. The data shall also be securely stored electronically for at least 2 years. All data collected pursuant to this condition shall be forwarded to the Manager quarterly as required by Condition 38.	1	Ongoing.

Condition Number	Consent Condition Owhanake Discharge to Water (#37282)	Compliance Rating	Comments
29A	That the Consent Holder shall monitor water quality at the following locations: a. Primary Treated Influent into the Plant That samples shall be taken from the primary treated influent flow at the point it enters the Owhanake treatment plant at intervals as specified in the Management Plan, and the samples shall be analysed for the following parameters: • 5-day carbonaceous Biochemical Oxygen Demand ($cBOD_5$) • Total Suspended Solids (TSS) • Total Nitrogen (TN) • Total Oxidised Nitrogen (NO_3 & NO_2) • Ammonia Nitrogen (NH_3 & NH_4) • Dissolved Reactive Phosphorus (DRP) • Total Phosphorus (TP) • Oil and Grease	1	Ongoing.
29Bi	That the Consent Holder shall monitor water quality at the following locations: b. Effluent Post Secondary Treatment System and Post Disinfection Treatment, prior to Constructed Wetland Turbidity (or equivalent) monitoring prior to disinfection system (i) That effluent entering the disinfection treatment system shall be continuously monitored for turbidity or an alternative effluent quality parameter that indicates its suitability for effective disinfection. The monitoring system shall be connected to an automated alarm that is designed to activate in the event that effluent quality requirements, as specified in the Management Plan, are exceeded in accordance with procedures the Management Plan.	1	The treated effluent from the new system passes through 4 x SINAP 80-120 membrane modules. These modules contain PVDF membrane sheets with a nominal pore size of 0.1 micron. Prior to discharge, the filtered water from the MBR is passed through the existing site UV which is rated at 120mJ/cm2 [= 120mWs/cm2] at 4m3/hr, 45% UVT. UVT is assessed once a week.
29Bii	That the Consent Holder shall monitor water quality at the following locations: b. Effluent Post Secondary Treatment System and Post Disinfection Treatment, prior to Constructed Wetland E. coli monitoring following disinfection system (ii) That effluent samples shall be taken immediately following the discharge from the disinfection system and shall be analysed for E. coli. Samples shall be taken at twice weekly intervals, at the same time each sampling day, post commissioning of any new key plant components or changes in flow regimes in excess of 25% increase in the average weekly flows compared to the average flows recorded in the previous month, until two week's full plant discharge quality compliance is achieved. At all other times, unless the frequency in condition 29(b)(iii) applies, sampling shall be undertaken weekly in summer and fortnightly in winter.	1	The measured E. Coli level in the treated water from the MBR is typically <1.6 cfu/100mL (i.e., below detection limits).

Condition Number	Consent Condition Owhanake Discharge to Water (#37282)	Compliance Rating	Comments
29Biii	That the Consent Holder shall monitor water quality at the following locations: b. Effluent Post Secondary Treatment System and Post Disinfection Treatment, prior to Constructed Wetland Increased E. coli monitoring if elevated turbidity (or equivalent) (iii) That in the event of the disinfection system influent quality in terms of turbidity (or an alternative parameter specified 29(b)(i) above) exceeding the quality trigger level and maximum non-compliance interval (minutes), as specified in the Management Plan for effective treatment, then the frequency of E. coli monitoring shall be increased to daily until both E. coli levels and turbidity are in compliance with this consent and the parameters specified in the Management Plan respectively.	1	Compliant.
29Biv	That the Consent Holder shall monitor water quality at the following locations: b. Effluent Post Secondary Treatment System and Post Disinfection Treatment, prior to Constructed Wetland Increased wetland monitoring if E. coli elevated above 10,000cfu/100mL (iv) That in the event of an E. coli exceedance of 10,000 cfu (or MPN) per 100 mL, then monitoring shall be undertaken to assess the extent of impact of the discharge on the wetland. This shall involve full monitoring of the Receiving Water Quality in accordance with condition 29(d), which shall commence as soon as practicable following the exceeding result and at least within one week of the exceeding discharge flow.	1	Compliant.
29Ci	That the Consent Holder shall monitor water quality at the following locations: c. Treated Wastewater immediately prior to the Discharge into the Natural Wetland (i) That samples of treated effluent shall be taken immediately prior to its discharge into the natural wetland. Samples shall be taken at weekly intervals at the same time each sampling day (This is site E2 on Site Sampling Plan .)	1	Compliant.
29Cii	That the Consent Holder shall monitor water quality at the following locations: c. Treated Wastewater immediately prior to the Discharge into the Natural Wetland (ii) That following four consecutive samples being in full compliance with the plant discharge quality standards specified in conditions 34, 35 and 36, then the frequency of analysis for that parameter only, may be decreased to monthly, and must return to weekly should the limit be exceeded again. This is except for analysis for E. coli, which shall be undertaken weekly in any event during the summer period 1 November to 30 April each year.	1	Compliant.

Condition Number	Consent Condition Owhanake Discharge to Water (#37282)	Compliance Rating	Comments
29Ciii	That the Consent Holder shall monitor water quality at the following locations: c. Treated Wastewater immediately prior to the Discharge into the Natural Wetland (iii) That all the samples taken from this location shall be analysed for the following parameters: • 5-day carbonaceous Biochemical Oxygen Demand ($cBOD_5$) • Total Suspended Solids (TSS) • Total Nitrogen (TN) • Total Oxidised Nitrogen (NO_3&NO_2) • Ammonia Nitrogen (NH_3&NH_4) • Dissolved Reactive Phosphorus (ORP) • Total Phosphorus (TP) • E. coli • Dissolved Oxygen • pH • Temperature • Conductivity	1	Compliant.
29Civ	That the Consent Holder shall monitor water quality at the following locations: c. Treated Wastewater immediately prior to the Discharge into the Natural Wetland (iv) That once Plant B has been commissioned, one sample per year of the surficial sediment in the unnamed tributary approximately 10m downstream of the outfall structure shall be analysed for dissolved and total recoverable Trace Metals.	1	Plant B has been installed and fully operational from January 2020. Sediment sample this reporting period taken May 2025.
29Cv	That the Consent Holder shall monitor water quality at the following locations: c. Treated Wastewater immediately prior to the Discharge into the Natural Wetland (v) That should the E. coli levels in the discharge from the treatment plant be in excess of 126 MPN (or cfu)/100 ml based on single sample exceedance in the summer period between 1 December to 31 March, then the Consent Holder shall also immediately notify the Manager and the Medical Officer of Health of the exceedance, and undertake any precautionary actions specified by the Medical Officer of Health. The Consent Holder shall also re-sample all sites specified in condition 29(d) above, as soon as practicable and within one week of receipt of the exceeding sample result, and also analyse the samples for faecal coliforms.	1	Auckland Council notified following elevated E. coli results.

Condition Number	Consent Condition Owhanake Discharge to Water (#37282)	Compliance Rating	Comments
29D	That samples shall be taken monthly of the receiving waters in tributaries to the upper Matiatia Wetland, the main wetland and the lower reaches of Matiatia Stream downstream of the wetlands, at least at the following locations. [These points were initially shown on plan titled "Sampling Points as Recommended by ARC Draft Resource Consent Conditions", dated 11 May 2004'', with the draft conditions to the hearing and are required to be specified in the Management Plan): (i) The western tributary, at least 10 metres upstream of the point of discharge;[W1) (ii) The western tributary, downstream of the point of discharge prior to the confluence with the eastern tributary [W2); (iii) The eastern tributary immediately upstream of the confluence with the western tributary; [W3] (iv) The main wetland tributary, immediately downstream of the confluence of the western and eastern tributaries [W4]; (v) The main wetland tributary immediately upstream of the confluence with the stream that drains into Matiatia Bay; [W5] (vi) The main wetland tributary immediately downstream of the confluence with the stream that drains into Matiatia Bay; [W6] (vii) The stream that drains into Matiatia Bay, at least 20 metres upstream of the beach foreshore; [W7] AND Once the discharge location is extended to include a discharge into the eastern tributary; (viii) The eastern tributary, at least 10 m upstream of the point of discharge. [W8] That sampling shall be undertaken at the same time and day of each month at the precise sample site locations as shown on the plan and included in the Management Plan, unless the Manager approves other locations in writing at the request of the Consent Holder.	1	Compliant. Low flows prevent samples on some occasions in summer.
30	That the Consent Holder shall analyse all the samples collected in accordance with condition 29 above for the parameters specified in the respective conditions and with the minimum detection limits specified in Appendix 1.	1	Compliant.
31	That the Consent Holder shall maintain the photographic record established under consent 26771 of the sampling locations in the wetland and stream and expand it to include all sites specified in part (d) of condition 29. The purpose of the photographic record shall be to identify changes in vegetation at specified locations within the wetland and Matiatia stream. In addition to the photographic record the Consent Holder shall also record observations of algal and/or bacterial growths in the lower Matiatia Stream.	1	Compliant.
32	That the samples required by the Monitoring Program specified in Condition 29 to 33 shall be collected and analysed in accordance with the latest edition of the "Standard Methods for the Examination of Water and Wastewater", published by the American Public Health Association, the American Water Works Association and the Water Environment Federation, or equivalent as approved in writing by the Manager.	1	Compliant.

Condition Number	Consent Condition Owhanake Discharge to Water (#37282)	Compliance Rating	Comments
33	That the results obtained in accordance with Conditions 29 to 33 shall be recorded in a log book and a copy forwarded to the Manager quarterly with the flow records required by condition 27 and within one month the date the sample was taken.	1	Compliant.
34	That the quality of the wastewater discharged from Plant A from the final point of the treatment process, immediately prior to its discharge into the natural wetland (as specified in condition 29(c)), shall comply with the following discharge standards: 5-day carbonaceous biochemical oxygen demand ($cBOD_5$) better than 10 g O_2/m^3 Total Suspended Solids (TSS) better than 10 g/m^3 Total Nitrogen (TN) better than 30 g N/m^3 Ammonia Nitrogen (NH_3&NH_4) better than 2 g N/m^3 Total Phosphorus (TP) better than 7 g P/m^3	N/A	Plant B has been installed and fully operational from January 2020.
35	That the quality of the wastewater discharged from Plant B from the final point of the treatment process, immediately prior to its discharge into the natural wetland (as specified in condition 29(c)), shall comply with the following standards: 5-day carbonaceous Biochemical Oxygen Demand ($cBOD_5$) better than 10g O_2/m^3 Total Suspended Solids (TSS) better than 10 g/m^3 Total Nitrogen4 better than 15 g N/m^3 Ammonia Nitrogen better than 2 g N/m^3 Total Phosphorus Summer better than 2 g P/m^3 Total Phosphorus Winter better than 4 g P/m^3 Dissolved oxygen better than 5 g O_2/m^3 pH 6.0 - 9.0	2	Non-compliant.
36	That the E. coli levels in the effluent immediately following discharge from the disinfection treatment system shall not exceed 50 MPN (or cfu)/100 mL.	1	Compliant.
37	That in the event of any sample having a contaminant quality that exceeds the limits specified in Conditions 34, 35 and 36 above. the following action shall be taken: • The Manager shall be advised of the exceedance and its possible cause as soon as practicable after receipt of the result. The Consent Holder shall implement any modifications to the treatment system and sampling regime in accordance with response actions specified in the Management Plan, or, in the event of significant adverse effects, implement appropriate mitigation measures that the Manager and Consent Holder consider appropriate following consultation. • The Consent Holder shall ensure action is taken immediately to address and remedy the problem and advise the Manager immediately of actions taken.	1	Compliant.

Condition Number	Consent Condition Owhanake Discharge to Water (#37282)	Compliance Rating	Comments
38	The consent holder shall ensure that the results of the monitoring undertaken in accordance with conditions 27 and 28 (flow monitoring) and conditions 29 to 36 (discharge quality and discharge quality standards) are reported to the Manager quarterly within 20 working days of the period ending 31 December, 31 March, 30 June and 30 September each year.	1	Ongoing.
39	The consent holder shall prepare an Annual Report and provide it to the Manager by 30 September each year. The Annual Report is to cover: SEE CONSENT PDF FOR LIST OF REQUIREMENTS	1	Compliant.
40	That the Consent Holder shall actively undertake investigations into the beneficial non potable reuse of the treated wastewater generated from the system, particularly wastewater generated during the summer period from 1 November to 31 March each year. The investigations shall be undertaken two yearly, first with in 6 months of the consent being exercised, and subsequently at two yearly intervals (unless agreed by the Manager that an investigation in that year is not necessary). The investigations shall be reported as part of the OWTP Annual Report required by condition 39 and shall involve the following: (1) That, the Consent Holder shall commission an independent investigation into reuse options for minimising the discharge of treated wastewater from the plant into the Owhanake wetland (particularly during summer). This shall include a detailed investigation of: (a) Possible reuse options for treated wastewater (b) The quality of the treated wastewater available for possible re-use (c) The demand for reuse of treated wastewater (d) The costs/economics of reuse of treated wastewater; (e) Possible health effects and risks (f) Additional if any treatment required for safe reuse of wastewater (g) The regulatory requirements for reuse of treated wastewater (h) The feasibility of re-use storage tanks. That the Consent Holder shall actively undertake investigations into the beneficial non potable reuse of the treated wastewater generated from the system, particularly wastewater generated during the summer period from 1 November to 31 March each year. The investigations shall be undertaken two yearly, first within 6 months of the consent being exercised, and subsequently at two yearly intervals (unless agreed by the Manager that an investigation in that year is not necessary). The investigations shall be reported as part of the OWTP Annual Report required by condition 39 and shall involve the following: (2) That the Consent Holder shall undertake public consultation in connection with the investigations required by clause (1) above;	1	Re-used as plant process water. Investigations ongoing for public use of effluent.

Condition Number	Consent Condition Owhanake Discharge to Water (#37282)	Compliance Rating	Comments
41	That should the Consent Holder wish to pursue off-site reuse of the wastewater, the Consent Holder shall ensure the following: a) The treated wastewater disinfection system and the wastewater reticulation system design shall be in accordance with the specifications for wastewater reuse in Auckland Regional Council Technical Publication 58 "On-site Wastewater Systems: Design and Management Manual" (TP58) as current at the time of the installation, or equivalent as approved in writing by the Manager That should the Consent Holder wish to pursue off-site reuse of the wastewater, the Consent Holder shall ensure the following: b) The Consent Holder shall provide a completed report of the investigation in accordance with the details required by condition 40 above and the proposed reuse system design details to the Manager and to the Medical Officer of Health, for their review and approval at least two months before the new reticulation works need to commence. That should the Consent Holder wish to pursue off-site reuse of the wastewater, the Consent Holder shall ensure the following: c) The Consent Holder shall obtain prior written approval from the Medical Officer of Health and from the Manager, prior to commencing any reticulation or other associated works for re-use.	N/A	No offsite reuse.
42	All complaints received by the consent holder about the discharges shall be logged immediately. The information shall include: a) the date. time, location and nature of the complaint; b) name, phone number and address of the complainant unless the complainant wishes to remain anonymous; c) action taken by WSL to remedy the problem; d) any equipment failure and remedial action taken; e) the weather conditions at the time of the complaint including estimates of wind direction, wind strength, temperature and cloud cover; and f) the date and name of the person making the entry. Details of any complaints received that affect the consent holder's ability to comply with the conditions of consent shall be provided to the Auckland Council within 24 hours of receipt of the complaint(s) or on the next working day.	1	Complaint log in place.
43	That the conditions of this consent (including any specified quantity) may be reviewed pursuant to section 128 of the Resource Management Act 1991 , by the giving of notice pursuant to section 129 of the Act, in the year of 2005 and subsequently at yearly intervals thereafter commencing in the month of June of that year, for any of the following purposes: SEE CEONSENT PDF FOR LIST OF REQUIREMENTS	1	Compliant.

Discharge to air compliance assessment (DIS60341182)

Condition Number	Consent condition Owhanake Discharge to air (#DIS60341182)	Compliance Rating	Comments
1	The discharge of contaminants into air shall be carried out in general accordance with the plans and all information submitted with the application, detailed below, and all referenced by the council as consent number DIS60341182: - Application form, and Owhanake WWTP Assessment of Environmental Effects (Rev.3), dated 25 June 2019 and prepared by Beca Ltd; - Owhanake Wastewater Treatment Plant Technical Odour Assessment (Rev.3), dated 26 June 2019 and prepared by Beca Ltd. - Emails prepared by Anshita Jerath, dated 24 July 2019, 26 July 2019 and 30 July 2019.	1	Compliant.
2	Air discharge consent number DIS60341182 shall expire 35 years from the date of commencement unless it has lapsed, been surrendered or been cancelled at an earlier date pursuant to the RMA.	1	
3	Access to the relevant parts of the property shall be maintained and be available at all reasonable times to enable the servants or agents of Auckland Council to carry out inspections, surveys, investigations, tests, measurements or take samples whilst adhering to the consent holder's health and safety policy.	1	Compliant. Most recent compliance Officer inspection completed 15 October 2024.
4	All processes on site shall be operated, maintained, supervised, monitored and controlled to ensure that all emissions authorised by this consent are maintained at the minimum practicable level.	1	Ongoing.
5	Beyond the boundary of the site, there shall be no dust and/or odour caused by discharges from the site, which in the opinion of an enforcement officer, is the cause of a noxious, dangerous, offensive or objectionable effect.	1	Compliant.
6	No discharges from any activity on site shall give rise to visible emissions, other than water vapour, to an extent which, in the opinion of an enforcement officer, is the cause of a noxious, dangerous, offensive or objectionable effect.	1	Compliant.
7	Beyond the boundary of the site, there shall be no hazardous air pollutant, caused by discharges from the site, which is present at a concentration that causes, or is likely to cause adverse effects to human health, the environment or property.	1	Compliant.
8	At least one month prior to the installation of any component that increases the treatment capacity beyond 130m³ of wastewater per day, the Team leader – Central Compliance Monitoring, shall be notified in writing. The notification shall be accompanied by schematic plans of the upgraded wastewater treatment plant and a proposed revision of the Operations Management Plan in accordance with Condition 14.	1	Compliant.
9	All processes on site shall be operated in accordance with the Operations Management Plan submitted and certified in accordance with Condition 13 of this consent.	1	Ongoing.

Condition Number	Consent condition Owhanake Discharge to air (#DIS60341182)	Compliance Rating	Comments
10	All processing equipment, buildings, ducting and emissions control equipment shall be maintained in good condition and as far as practicable be free from leaks in order to prevent the escape of fugitive emissions.	1	Ongoing.
11	The meteorological conditions and proximity of sensitive receptors shall be considered prior to undertaking any potentially odorous activities at the site.	1	Compliant.
12	A walkover inspection of the site shall be undertaken at least once per week to identify any odours that may be originating from the site. The results shall be recorded and any odour potentially detectable off-site investigated immediately. Where necessary, remedial action shall be undertaken as soon as practicable. The procedures for the walkover, recording of the results and any remedial actions taken shall be as specified in the Operations Management Plan required by Condition 13.	1	Ongoing.
13	Within three months of the date of commencement of this consent an Operations Management Plan (OMP) shall be submitted to the Team Leader – Central Compliance Monitoring for certification, to confirm that the activities undertaken in accordance with the OMP will achieve the objectives of the plan and compliance with the conditions of this air discharge consent. Any subsequent review of the OMP shall also be submitted to the council for certification. The consent holder shall meet the costs of the production, certification, monitoring and review of the OMP. REFER TO DECISION DOCUMENT FOR FURTHER DETAILS.	1	O&M manual dated February 2020 in place.
14	The OMP shall be reviewed prior any substantial alterations to the site and at least once every three years and any subsequent changes to the certified OMP shall be submitted to the council for certification prior to implementation. The council will advise the Consent Holder in writing if any aspects of the OMP are considered to be inconsistent with achieving the provisions of this consent.	1	Compliant. Most recent air quality management plan approved by Auckland Council in May 2024. Next revision due 2027.
15	Details of all inspections, records, monitoring and test results that are required by the conditions of this consent shall be kept for a minimum of two years from the date of each entry and shall be provided to the council on request.	1	Ongoing.
16	The council shall be notified as soon as practicable in the event of any significant discharge to air, which results or has the potential to result in a breach of air quality conditions or adverse effects on the environment. The following information shall be supplied: a) Details of the nature of the discharge; b) An explanation of the cause of the incident; and c) Details of remediation action taken.	1	Compliant.

Condition Number	Consent condition Owhanake Discharge to air (#DIS60341182)	Compliance Rating	Comments
17	All air quality complaints that are received shall be recorded. The complaint details shall include: a) The date, time, location and nature of the complaint; b) The name, phone number and address of the complainant, unless the complainant elects not to supply these details; c) Weather conditions, including approximate wind speed and direction, at time of the complaint; d) Any remedial actions undertaken. Details of any complaints received shall be provided to the council within one working day of the complaint.	1	Complaint log in place.
18	Under section 128 of the RMA, the conditions of this consent may be reviewed by the Manager Resource Consents at the consent holder's cost in order to: a) Deal with any significant adverse effects on the environment arising from the exercise of the consent which was not foreseen at the time the application was considered and which is appropriate to deal with at the time of the review. b) With regard to (a) above, should there be complaints related to odour from the WWTP received by the Council or unforeseen adverse odour effects, then the Team Leader – Central Compliance Monitoring may request the installation of a meteorological monitoring station to measure wind speed, wind direction and temperature at the site. c) Consider the adequacy of conditions which prevent nuisance and adverse effects beyond the boundary of the site, particularly if regular or frequent complaints have been received and validated by an enforcement officer. d) Consider developments in control technology and management practices that would enable practical reductions in the discharge of contaminants to air. e) Alter the monitoring requirements, including requiring further monitoring, or increasing or reducing the frequency of monitoring. f) Take into account any Act of Parliament, regulation, national policy statement, regional policy statement or relevant regional plan that relates to limiting, recording or mitigating emissions by this consent. Or, the consent may be reviewed by the Manger Resource Consents at any time, if it is found that the information made available to the council in the application contained inaccuracies which materially influenced the decision and the effects of the exercise of the consent are such that it is necessary to apply more appropriate conditions.	1	N/A

Appendix C. Receiving environment sampling locations


S1
S7
S2
S3
S4
S6
S5
Ocean View Road
Owhanake (Waiheke) Treatment

Appendix D. Data Sources

Download location of environmental monitoring data used in this report.

Category	Parameter	Source platform	Tag/ID
Influent volume	Matiatia inflow	Pi	DPMAT_80_FQ_001_VOLUMEDAY
Influent volume	Commercial inflow	N/A	Calculation
Influent volume	Total inflow		DTWHK_20_FT_001_PV
Rainfall volume	N/A	Auckland Council	659401
Effluent volume	N/A	Pi	DTWHK_80_FQ_001_EFFVOLDAY$
Influent quality	All	Pi	N/A
Effluent quality	DO, pH	ID form	N/A
Receiving environment	All	Pi	N/A
Sediment quality	All	Labware	N/A