

Beachlands Wastewater Treatment Plant
2025-2026 Annual Report

Final - September 2026

Watercare

QUALITY INFORMATION

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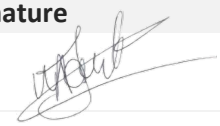
REVISION HISTORY

Rev	Revision Date	Name	Position	Signature
1	08/09/2026	Michiel Jonker	Environmental Care Manager	
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APPROVED

Date	Name	Position	Signature
29/09/2026	Michiel Jonker	Environmental Care Manager	

CONSENT CHANGE AND MONITORING HISTORY

Change type	Description	Effective date	Reference / condition	Reporting / monitoring implications
Management plan	Environmental Monitoring Plan written.	July 2006	14	N/A
Consent variation	A variation of consent 26875 and other associated consents changed the quarterly reporting periods to align with financial quarters.	6 December 2013	22	Quarterly reports submitted within 20 working days of the specified quarters.
Monitoring location moved	Reference site A for the 3-yearly Te Puru Stream assessments relocated 10 m upstream from previous monitoring assessments	January 2024		Trend analysis must include this consideration where applicable.
Management plan update	Updated the original (2009) Operations Management Plan to reflect current operations.	May 2024	14	N/A
Air Discharge Consent Expiry Extension	Confirmation received from Auckland Council that the expiry date of discharge permit DIS60263353 has been extended from 31 December 2026 to 27 August 2028 under the Local Government (Water Services) (Repeals and Amendments) Act 2025.	21 April 2026	Duration of consent	N/A

LIST OF ACRONYMS AND ABBREVIATIONS

Abbreviation	Definition
$cBOD_5$	5-day carbonaceous biochemical oxygen demand
BNR	Biological nutrient removal
DO	Dissolved oxygen
DRP	Dissolved reactive phosphorus
E. coli	*Escherichia coli*
NH_x-N	Ammonia and ammonium, reported in milligrams nitrogen
NO_3-N	Nitrate as measured in units of nitrogen
RMA	Resource Management Act
TN	Total nitrogen
TSS	Total suspended solids
Watercare	Watercare Services Limited
WWTP	Wastewater treatment plant

EXECUTIVE SUMMARY

The 2025-2026 annual report for the Beachlands Wastewater Treatment Plant (WWTP) provides an overview of the plant's performance, environmental monitoring, and compliance with resource consents. Covering the period from 1 July 2025 to 30 June 2026, the report highlights key operational changes, compliance results, and monitoring data, fulfilling regulatory reporting obligations.

Key points include:

- Effluent discharge: The average daily effluent discharge for the year was 2,364 m^3/day, below the consented limit of 2,800 m^3/day. However, during large weather events, the plant exceeded the discharge limit on 52 days (compared with 32 days during 2024–2025) due to high inflow and infiltration caused by rainfall.
- Effluent quality: The WWTP consistently met effluent discharge quality consent standards for all parameters such as 5-day carbonaceous biochemical oxygen demand ($cBOD_5$), total suspended solids (TSS), ammoniacal nitrogen and bacteria. Additional sampling during high flow events showed no breaches in limits.
- Environmental monitoring: No monitoring of the Te Puru Stream was undertaken during this reporting period. Monitoring is undertaken 3-yearly, with the last round of monitoring completed in 2025 and provided with the 2024-2025 annual report.
- Air discharge: Compliance was achieved with all air discharge consent conditions and Operations Management Plan requirements. No odour was detected at the site boundary by Watercare staff, and no community complaints were received during the reporting period.
- Compliance: The WWTP achieved a high level of compliance across both water and air discharge consents, exceeding only the discharge volumetric limits throughout the reporting period.

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1 INTRODUCTION

This annual report presents the compliance monitoring results for the Beachlands Wastewater Treatment Plant (WWTP) from 1 July 2025 to 30 June 2026. The report includes:

- Description of the WWTP
- Relevant consents and management plans
- Plant performance
- Summary of compliance
- Tables of monitoring data form appendices to the main body of the report.

Table 1-1 lists the active resource consents for the WWTP. Watercare made no changes to these consents in 2025-2026 and is progressing with the application for new discharge permits.

Table 1-1: Beachlands WWTP resource consents

Consent type	Consent number	Council number	Expiration date
Wastewater discharge permit	26875	DIS60263339	31/12/2025*
Air discharge permit	26876	DIS60263353	27/08/2028**
Stormwater discharge permit	33614	DIS60266874	31/12/2041

* Whilst the expiration date for DIS60263339 has passed, the consent remains operative under Section 124 of the RMA while the renewal application is processed.

**Confirmation received from Auckland Council on 21 April 2026 that the expiry date of discharge permit DIS60263353 (legacy number 26876) has been extended from 31 December 2026 to 27 August 2028 under the Local Government (Water Services) (Repeals and Amendments) Act 2025.

2 TREATMENT PLANT

2.1 Current operation

The WWTP is at 100 Okaroro Drive, Beachlands, approximately 3 km from Beachlands and 6 km from Maraetai (by road). The WWTP is an activated sludge plant with biological nutrient removal (BNR). The following main unit processes are:

- Screenings and grit removal
- Biofilter
- Four-stage Bardenpho lagoon
- Clarifier
- Disk filtration
- UV disinfection
- Staged sludge digestion lagoons
- Sludge drying beds
- Stormflow buffer lagoon for raw wastewater
- Post-treatment lagoon for storm events.

The treated effluent discharges via ground soakage to the farm pond along the receiving tributary. The farm pond tributary meets another arm to form Te Puru Stream.

All dried biosolids go to a permitted solid waste landfill at Hampton Downs.

2.2 Changes in this reporting year

Watercare completed the relining of 6.2km of local wastewater pipes within the Beachlands catchment between April 2025 and January 2026, to reduce inflow and infiltrations. While no further relining works are currently planned, Watercare will continue to monitor the catchment to inform any future network improvement requirements.

2.3 Future changes

Watercare is progressing the design of the wastewater treatment plant upgrade in 2026-2027 to improve treated effluent quality, enhance operational resilience, and provide capacity to accommodate future growth within the catchment.

Work will progress in parallel on the re-consenting process for the discharge permit.

3 METHODOLOGY

3.1 Monitoring

The following monitoring was undertaken during the 2025-2026 annual reporting period in accordance with consent requirements.

- Effluent flow was continuously measured by a calibrated flow meter at the WWTP outlet, with daily totals recorded and aggregated to monthly and annual values.
- Effluent quality was monitored twice monthly at the UV discharge point, with additional samples collected during discharge volume exceedances. Analyses were undertaken by Watercare laboratory (IANZ-accredited).
- The receiving environment monitoring was limited to weekly upstream and downstream sampling of the discharge farm pond. 3-yearly monitoring of the Te Puru Stream catchment is next due in 2028.
- Air quality monitoring comprised weekly biofilter pH and moisture checks, and daily odour inspections at the site boundary.

3.2 Data handling and analysis:

- All raw monitoring data were collated using Watercare's Pi Historian. Raw data is provided in Appendix A and Pi tag IDs are listed in Appendix B.
- Data was gathered in Microsoft Excel and summarised using consent-specified statistics (rolling medians, 90th and 95th percentiles, daily maximums.

3.3 Compliance Criteria

The assessment of the WWTP performance considers:

- Results of compliance monitoring
- Recorded incidents and complaints.

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

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.

4 RESULTS

4.1 Effluent volumes

Figure 4-1 displays daily effluent volumes for July 2025 to June 2026 (individual daily volumes and rainfall are in Appendix A). The consented daily discharge limit is 2,800 m^3/day. The average daily effluent discharge during the reporting period was 2,364 m^3/day, higher than the 2,006 m^3/day average for the 2024-2025 reporting period. The annual total was 862,753 m^3, also higher than the previous reporting period (732,091 m^3).

Daily discharge volumes exceeded the consented limit on 53 days throughout the period. Total rainfall for the reporting period was 1,603 mm, which is considerably higher than the 1,113 mm total in 2024-2025; therefore, the increased effluent discharge and consent volume limit exceedances are a result of higher inflow and infiltration in the wastewater network. It was not possible to store all the incoming flows in the storm buffer and post-treatment ponds; the discharge was increased to treat as much of the raw wastewater as the processes allowed. The alternative to exceeding the discharge consent limit would be to allow wastewater to back up into the network, risking overflows of untreated wastewater to the environment.

The discharge volumes in 2025-2026 are comparable to 2022-2023 (annual total of 834,294 m^3 and daily average of 2,285 m^3/day), which had elevated inflow and infiltration associated with greater rainfall, including the Auckland Anniversary and Cyclone Gabriel events.

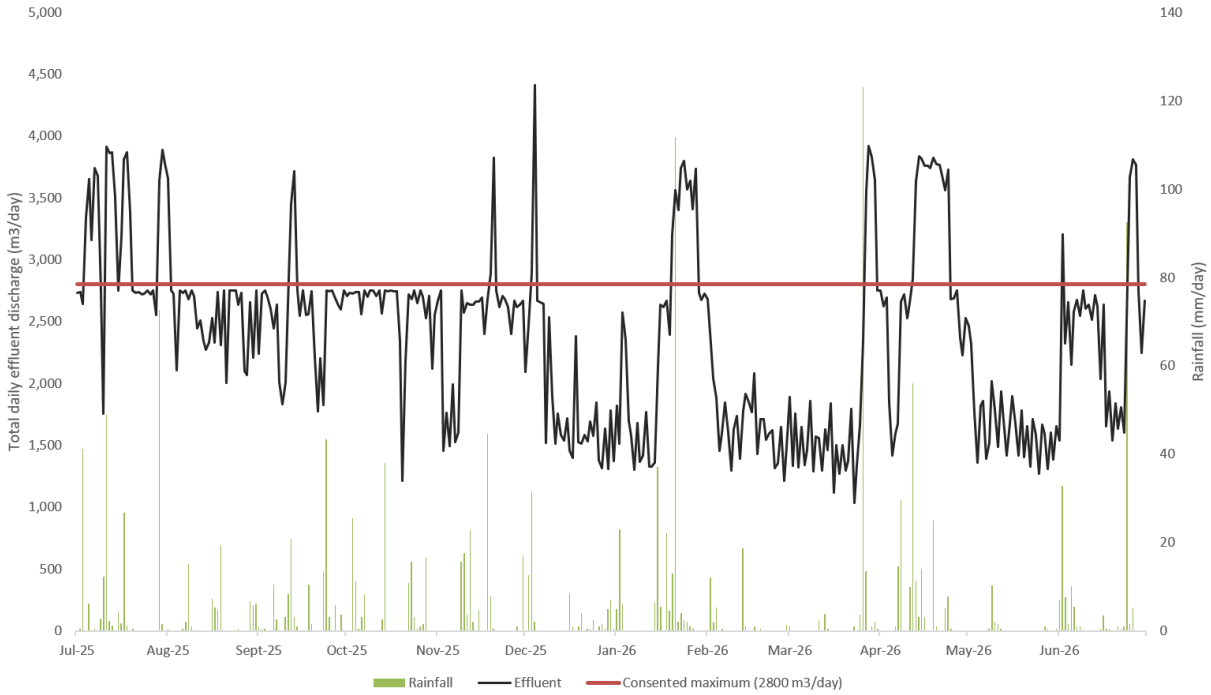

Figure 4-1: Beachlands WWTP effluent discharge volumes (July 2025 - June 2026).

4.2 Effluent quality

The WWTP met all compliance criteria for discharge effluent quality across the reporting period. Table 4-1 summarises effluent quality and the relevant calculations with consent limits. Appendix A contains the raw data.

Extra samples were taken in addition to the routine samples (when applicable) during each event when the volume of the discharge exceeded the daily limit (Section 4.1). The results for these extra samples indicated the effluent quality did not breach the consent limits during the increased flows. The results of these extra samples are included with the reporting of the routine samples in this report.

4.3 Receiving environment monitoring

Watercare monitors the water quality upstream and downstream of the farm pond weekly (Appendix A). More intensive receiving environment monitoring is carried out every three years, as agreed with Auckland Council in 2016. The most recent monitoring was undertaken in March and April 2025 by Bioresearches and was provided with the 2024-2025 annual report. The next round of monitoring is due in 2028.

Table 4-1: Summary of effluent monitoring for Beachlands WWTP (2025-2026)

Parameter	Units	n	Minimum	Average	Maximum	Consented Maximum	Median	Consented Median	90th Percentile	Consented 90th Percentile	Compliant
Discharge Volume	m^3/day	365	1,034	2,364	4,411	2,800	2,538	-	-	-	No
Escherichia coli	cfu/100mL	93	1.6	7.3	100.0	-	1.6	-	-	-	-
Faecal Coliforms	cfu/100mL	93	1.6	9.0	200.0	-	1.6	≤14	-	-	Yes
$cBOD_5$	mg/L O	65	0.5	1.1	3.1	-	0.9	-	1.8	≤15	Yes
Nitrate	mg N/L	65	0.33	5.55	9.26	-	5.90	-	7.40	≤15	Yes
Ammoniacal Nitrogen	mg N/L	65	0.02	0.27	6.60	-	0.03	-	3.03 0.09	≤4 (Nov-Apr) * ≤5 (May-Oct) *	Yes
Soluble Reactive Phosphorus	mg P/L	65	0.01	0.24	0.91	-	0.22	-	0.43	≤5	Yes
pH	No units	65	6.5	6.8	7.4	-	6.8	-	-	-	-
Total Suspended Solids	mg/L	65	1.0	3.7	8.4	-	3.4	-	7.1	≤15	Yes

Note: Quarterly reports submitted to Auckland Council provide compliance assessments based on ten samples (rolling).

Colours indicate compliance limits and status.

*95th percentile

4.4 Air quality

Routine odour inspections are carried out by the operator and detailed in weekly log sheets. No operator recorded any odours at the boundary during the inspections.

4.4.1 Biofilter monitoring

Figure 4-2 shows results for weekly biofilter pH and moisture-content monitoring. Biofilter moisture content averaged at 64.6% during the monitoring period, in accordance with the maintenance requirements outlined in the air quality management plan (approximately 60%). The pH of the biofilter was typically near neutral but had some more acidic periods in summer and autumn. This has minimal impact on the performance of the biofilter and is adjusted with lime shells as needed.

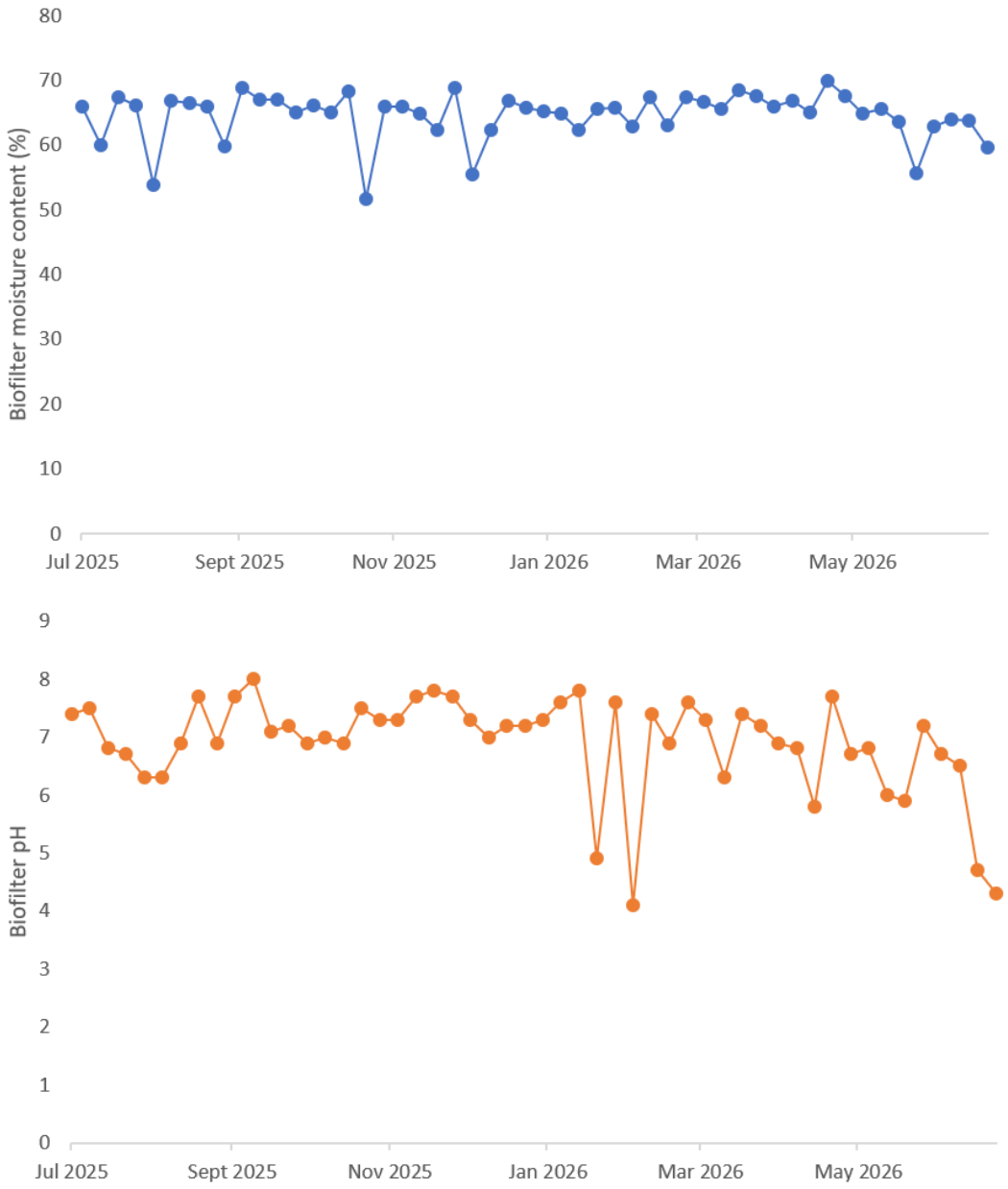

Figure 4-2: Biofilter monitoring results (2025-2026).

4.5 Complaints and incidents

The Beachlands WWTP did not receive any complaints or have any incidents in 2025-2026.

5 CONCLUSION

The 2025-2026 annual report for the Beachlands WWTP reflects a year of steady operational performance and consistent compliance with resource consent conditions. Challenges to meet the effluent volume limit continue due to high inflow and infiltration, which led to discharge volume exceedances on 52 days. Additional water quality testing conducted during these events showed that the effluent remained within concentration limits.

An assessment of compliance with each consent is in Table 5-1 and Table 5-2.

Table 5-1: Compliance assessment with consent 26875 (water)

Condition Number	Consent Condition Beachlands Discharge to Stream (#26875)	Compliance Rating	Comments
01	ARC agents may access the property at reasonable times to carry out inspections, surveys, tests, or measurements, or to take samples.	1	Compliant.
02	Consent Holder shall operate the plant and associated processes in accordance with the documentation submitted to the ARC as part of application number 26875 and with the conditions of this consent. No alterations shall be made to the plant or processes that do not, or are not likely to, comply with the provisions of this consent, a regional rule, or regulations under the RMA 1991.	1	Compliant.
03	Within 3 years of the granting of this consent, an upgrade to the wastewater treatment and disposal system shall be designed, constructed, installed and operated as an activated sludge process with clarifier and phosphorus removal facility, sand filtration or equivalent and UV disinfection.	1	Completed in Dec 2008 and performance tested in July 2009.
04	Consent Holder shall engage an Engineer experienced in wastewater treatment and disposal systems to certify in writing to the Manager, within 3 months of granting of this consent, that all existing system components have been inspected and are considered to be in sound condition for continued use in accordance with this consent, and within 3 months of commissioning of any new key system component, that the new component has been inspected and installed in accordance with standard engineering practice and with the specifications and conditions of this consent.	1	Completed by Fulton Hogan and Opus as consultant.
05	"As-built" plans for the wastewater treatment system shall be forwarded to the Manager within 3 months of commissioning of any new key component of the system.	1	Acknowledgement letter from Council on 30 Nov 2009 and O&M manual on 20 Oct 2009 from Manukau Water.
06	No trade, non-domestic or other strong (non-domestic) wastes shall be permitted to be connected to the wastewater system serviced by the Treatment Plant without the Manager's written approval. When seeking Manager approval for a proposed new trade, non-domestic or other strong (non-domestic type) waste connection, the Consent Holder shall verify to the Manager's satisfaction that the proposed waste contribution will not change the performance of the treatment system or result in any significant decrease in wastewater quality discharged from the Plant. In this consent, "trade wastes" refers to anything which is discharged from trade premises as defined in s 489 of the LGA 1974. Industrial waste shall not be permitted to be connected to the wastewater system serviced by the Treatment Plant.	1	Compliant and covered by Trade Waste Bylaw.
07	The population serviced by the plant shall not exceed 10,000.	1	
08	Consent Holder shall ensure that for the duration of this consent the plant is maintained and operated by a suitably qualified and experienced wastewater treatment plant operator. This operator shall perform the operational and maintenance responsibilities specified in the Management Plan to comply with the conditions of this consent.	1	Compliant.

Condition Number	Consent Condition Beachlands Discharge to Stream (#26875)	Compliance Rating	Comments
09	Consent Holder shall maintain the system in an efficient and professional manner, in accordance with the Management Plan required by Condition 14 and the other conditions of this permit, to ensure that it functions efficiently such that any impact on the receiving environment is minimised.	1	Ongoing.
10	Consent Holder shall desludge the plant as required and the sludge shall be dewatered 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 disposal facility, in a manner that ensures that the sludge or runoff from the sludge does not enter any natural waters.	1	Ongoing. Desludging is usually three times per year and the sludge is disposed at the landfill.
11	Consent Holder shall log all complaints received and system malfunctions regarding the wastewater.	1	Ongoing.
12	Consent Holder shall ensure that appropriate personnel are available to respond to any alarm sounding or complaint arising from a wastewater treatment plant emergency, on a 24/7 basis. The Consent Holder shall ensure that emergency situations are responded to as soon as practicable upon receipt of indication. Complaints regarding odour from the treatment works shall be handled in accordance with Condition 24 of Permit No. 26876.	1	Ongoing.
13	In the event that any incident with the wastewater treatment plant and/or discharge results in more than 2 complaints being received within 48 hours, then the Consent Holder shall report the incident and the complaints to the Manager as soon as practicable.	1	Did not occur during this reporting year.
14	Consent Holder shall prepare a Management Plan for the wastewater treatment and disposal system to enable compliance with the conditions of this consent and as necessary to ensure that any adverse effects on the environment are minimised. The Plan shall be in accordance with the conditions of this consent and shall cover the following: a) inspection and maintenance; b) monitoring and reporting; c) contingency plans; d) desludging of waste activated sludge. See consent condition for further detail.	1	Management Plan and O&M were submitted to Council on 16 Nov 2009. An updated management plan was submitted in May 2024.
15	Consent Holder shall continuously measure and record effluent discharge flow volume from the treatment plant. The flow measuring device shall be capable of providing cumulative measurements to an accuracy of plus or minus 5% and shall be maintained in accordance with the manufacturer's specifications at all times. 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% is achieved. The flow measuring device shall be respectively read at the same time each day. These readings shall be recorded in a logbook and copies of the flow data for the prior 3 months shall be reported to the Manager in the quarterly monitoring report, as per Condition 22.	1	Ongoing.

Condition Number	Consent Condition Beachlands Discharge to Stream (#26875)	Compliance Rating	Comments
16	Consent Holder shall collect samples weekly from the discharge point of the UV sterilisation unit prior to discharge into the irrigation trenches connected to the riparian wetland and analyse the samples for the following parameters: BOD, total suspended solids, total oxidised nitrogen, ammonia nitrogen, dissolved reactive phosphorus, faecal coliforms, e. coli, pH.	1	As per condition 16 (see the full requirement in the consent document), the monitoring shall be reduced to fortnightly for such time as full compliance continues to be achieved. Our consent sampling is not scheduled fortnightly instead consent sampling is scheduled for every 2nd and 4th Wednesday in a month.
17	All sample analyses shall be undertaken to the detection limits identified and the results reported in the units specified in the appended table (Appendix 1).	1	Ongoing.
18	All samples collected as per Conditions 16 and 17 shall be collected and analysed in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater", APHA, AWWA, WPCE or equivalent approved in writing by the Manager.	1	Ongoing.
19	The effluent quality as determined by the results of the analyses required by Conditions 16, 17 and 18 shall comply with the following standards: BOD - better than 15g/m3 at the 90% percentile; suspended solids - better than 15g/m3 at the 90% percentile; ammonia nitrogen (summer, i.e. November to April inclusive) - better than 4gN/m3 at the 95th percentile; ammonia nitrogen (winter) - better than 5gN/m3 at the 95th percentile; nitrate nitrogen - better than 15gN/m3 at the 90th percentile; nitrate nitrogen (for the transition phase) - better than 25gN/m3 at the 90th percentile; dissolved reactive phosphorus - better than 5g/m3 at the 90th percentile; dissolved reactive phosphorus (for the transition phase) - better than 12g/m3 at the 90th percentile; faecal coliforms - better than a median of 14 cfu/100ml. See consent condition for further details.	1	Compliant.
20	Following full commissioning of the upgraded system, samples shall be collected from the discharge point of the UV sterilisation unit prior to discharge into the irrigation trenches connected to the riparian wetland with the purpose of confirming the efficacy of the upgraded system at removing hormonally active compounds.	1	Ongoing.
21	Consent Holder shall design an Impact Assessment Monitoring Program for the ongoing assessment of any effects of the discharge on the receiving environment. The Program shall include provision to monitor the following effects on the receiving waters of Te Puru stream: water quality effects; sediment quality effects; ecological effects; birth defects amongst animals that obtain drinking water downstream of the discharge, provided that in absence of scientific evidence to the contrary, the presence of any birth defects in the vicinity shall not be inferred to have been caused by the discharge. See consent condition for further detail.	1	Earth Consult completed IAMP on 29 Nov 2005 and Pond Sediment sampling report in May 2014. The last Te Puru water quality monitoring assessment by Bioresearches was completed in March and April 2025.

Condition Number	Consent Condition Beachlands Discharge to Stream (#26875)	Compliance Rating	Comments
22	That the results of the monitoring undertaken in accordance with Conditions 15, 16, 17 and 18 shall be reported to the Manager - Change to condition - please refer to condition 22a	1	Ongoing.
22a	That the results of the monitoring undertaken in accordance with Conditions 15, 16, 17 and 18 shall be reported to the Manager quarterly within 20 working days of the period ending 30 September, 31 December, 31 March and 30 June each year. The quarterly monitoring report shall identify any exceedences of the discharge standard limits specified in Condition 19 with an explanation for the exceedences. The report shall also include comment on general plant performance and any trends in changes in the discharge volume and/or the discharge quality standards over time. The report shall generally comply with the Monitoring and Reporting details defined by the Management Plan as required by Condition 14.	1	Ongoing.
23	Consent Holder shall consult with representatives of the local community, including any appropriate local community groups and neighbours to facilitate the establishment and maintenance of a Community Liaison Group (CLG). See consent condition for further detail.	1	Ongoing.
24	Within one year of the granting of this consent, riparian planting in accordance with ARC Technical Publication 148 and fencing of the entire length of the stream within the Consent Holder's property shall be completed.	1	Completed in Feb 2007.
25	Conditions of this consent may be reviewed by the Manager pursuant to Section 128 of the RMA 1991, by the giving of notice pursuant to Section 129, in the month of June of the year following that in which the consent is granted, and annually thereafter in order to do things listed in i) to vi) in the consent condition.	1	Compliant.
0	The consent holder shall that the maximum discharge does not exceed 2,800 m^3 per day.	2	Daily discharges from the Beachlands WWTP were above consented maximum on 52 days in the reporting period.

Table 5-2: Compliance assessment for consent 26876 (air)

Condition Number	Consent Condition Beachlands Discharge to Air (#26876)	Compliance Rating	Comments
01	ARC agents may access the property at reasonable times to carry out inspections, surveys, tests, or measurements, or to take samples.	1	Compliant.
02	Consent Holder shall operate the plant and associated processes in accordance with the documentation submitted to the Council as part of application number 26876, where not amended by the conditions of this consent. No alterations shall be made to the plant or processes that do not, or are not likely to, comply with the provisions of this consent, a regional rule, or regulations under the RMA 1991.	1	Compliant.
03	The construction of the additional system components permitted under the Works Condition shall be carried out under the supervision of an Engineer experienced in wastewater treatment and disposal systems. The supervising Engineer shall certify in writing to the Manager, within 3 months of the commissioning of any new key component of the system, that this has been designed, inspected and installed in accordance with standard engineering practice and with the specifications and conditions of this consent.	1	Completed.
04	Consent Holder shall submit "As-Built" plans and detail information for the wastewater treatment system to the Manager within 3 months of commissioning any new key component of the system, including any biofilter or other odour control equipment. Such detail information shall include, but not be limited to, the items listed in a) to e) of the consent condition.	1	Completed and submitted to Council by OPUS in 2008.
05	Any biofilter or other odour control equipment shall be designed, installed and maintained to provide effective odour control in accordance with the requirements of that version of TP152 that is current 3 months prior to the installation of that equipment.	1	Completed and submitted to Council by OPUS in 2008.
06	Consent Holder shall provide details of the designs of any biofilter(s) or other odour control equipment to the Manager for review prior to installation. The Manager shall advise the Consent Holder in writing if there are any matters associated with the biofilter design that are considered to be inconsistent with the conditions of this consent.	1	Completed and submitted to Council by OPUS in 2008.
07	From the date of the commissioning of the second clarifier, the inlet step screen works and screenings collection area shall be enclosed to prevent fugitive discharges to atmosphere, and any contaminated or odorous gases shall be extracted to a biofilter or other odour control equipment prior to discharge to atmosphere.	N/A	Presently operating with only one clarifier, inlet works are enclosed, and odorous gases treated in the biofilter.
08	Any belt press for dewatering of sewage sludge shall be enclosed within a building to prevent fugitive discharges to atmosphere and any contaminated or odorous gases shall be extracted to a biofilter or other odour control equipment prior to discharge to atmosphere.	N/A	Presently the plant does not use belt press for dewatering.
09	Consent Holder shall at all times operate, maintain, supervise, monitor and control all processes on site so that emissions authorised by this consent are maintained at the minimum practicable level.	1	Compliant.

Condition Number	Consent Condition Beachlands Discharge to Air (#26876)	Compliance Rating	Comments
10	Beyond the boundary of the site there shall be no odour, dust, particulate, smoke, ash or fume caused by discharges from the site which, in the opinion of an enforcement officer, is noxious, dangerous, offensive or objectionable.	1	None reported during the year.
11	No discharges from any activity on site shall give rise to visible emissions, other than water vapour and steam, to an extent which, in the opinion of an enforcement officer, is noxious, dangerous, offensive, or objectionable.	1	None reported during the year.
12	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 is, or is likely to be, detrimental to human health or the environment.	1	None reported during the year.
13	No part of the process shall be operated without the emissions control equipment being fully operational and functioning correctly.	1	Compliant.
14	All ducting and emissions control equipment shall be maintained in good condition and be free from leaks in order to prevent fugitive discharges to atmosphere.	1	Compliant.
15	All relevant fans and ducting to air emission control equipment shall draw sufficient negative pressure to ensure that fugitive emissions are kept to a practicable minimum.	1	Compliant.
16	All sludge, biosolids and screenings shall be disposed of off site to an appropriately authorised facility unless alternative disposal methods are agreed to in writing by the Manager.	1	Compliant.
17	No solid or liquid waste materials shall be disposed of on the site by open burning.	1	Compliant.
18	Consent Holder shall give consideration to wind direction and the proximity of neighbouring properties prior to undertaking any potentially odorous activities on the site.	1	Ongoing.
19	All sludge removal from the sludge accumulation lagoons and subsequent de-watering and disposal shall be carried out in a manner that minimises odour.	1	Ongoing. Sludge disposed offsite.
20	A walkover inspection of the site shall be undertaken at least once every working day to identify any odours that may be originating from the site. Any evidence of significant odour shall be recorded and investigated. Where necessary, remedial actions shall be undertaken as soon as practicable to reduce odour discharges. The procedures for the walkover, recording of the results and any remedial actions taken shall be as specified in the Air Quality Management Plan.	1	Ongoing.
21	From the date of commissioning of any biofilters, the Consent Holder shall record, as part of the Air Quality Management Plan, a log of all relevant information regarding the condition of the biofilters, including items listed in in a) to f) of the consent condition.	1	Ongoing.

Condition Number	Consent Condition Beachlands Discharge to Air (#26876)	Compliance Rating	Comments
22	All records, monitoring and test results that are required by the conditions of this consent shall be made available on request, during operating hours, to an enforcement officer and shall be kept for a minimum period of 12 months from the date of each entry.	1	Compliant.
23	Consent Holder shall notify an enforcement officer as soon as practicable in the event of any significant increase in the discharge of contaminants to air, which may result in adverse effects on the environment. In the event of an incident, shall provide a written report to the Manager within 10 working days of the occurrence. The report shall give reasons for the incident, any remedial actions taken and any mitigation measures taken to prevent its reoccurrence.	1	No significant increase in the discharge of odour to air during the reporting year.
24	Consent Holder shall log all air quality complaints received. The complaint details shall include: a) date, time, position and nature of complaint; b) weather conditions at the time of the complaint; c) name, phone number and address of the complainant, unless not supplied; d) any remedial actions undertaken. Details of any complaints received shall be provided to the Manager within 7 days of receipt of the complaint/s.	1	Ongoing.
25	Consent Holder shall prepare an Air Quality Management Plan, which specifies all management and operation procedures necessary to comply with the conditions of this consent. This plan may be a section of the Operations Management Plan. The plan shall include but not be limited to details listed in a) to i) in the consent condition.	1	Air Quality Management Plan (AQMP) completed in Nov 2009 and O&M in June 2009 by OPUS. An updated AQMP was included in the May 2024 revision of the O&M plan.
26	Consent Holder shall submit the Air Quality Management Plan to the Manager for review within 3 months of commencement of this consent. Any subsequent changes to the Management Plan shall be made and submitted to the Manager within one month. The Manager will advise the Consent Holder in writing if any aspects of the Management Plan are considered to be inconsistent with achieving the conditions of this consent.	1	First AQMP submitted to Council on 16 Nov 2009. An updated AQMP was prepared, submitted to and approved by Auckland Council in May 2024.
27	A compliance report summarising the plant performance and all information relevant to complying with this consent and with the Air Quality Management Plan shall be submitted to the Manager every 6 months.	1	Ongoing. Report submitted annually.
28	Within 3 months of commissioning any subsequent alterations to the treatment system, the Air Quality Management Plan shall be amended, to the satisfaction of the Manager, to reflect any changes in the management and operation procedures necessary to comply with the conditions of this consent.	1	No alterations required.
29	Conditions of this consent may be reviewed by the Manager pursuant to Section 128 of the RMA 1991, by the giving of notice pursuant to Section 129, in the month of June of the year following that in which the consent is granted, and annually thereafter in order to do things listed in a) to e) of the consent condition.	1	Compliant.

Appendix A. Supplementary data

Discharge volumes

Date	Effluent volume (m^3)	Rainfall (mm/day)	Date (continued)	Effluent volume (m^3)	Rainfall (mm/day)
1-Jul-25	2,732	0	1-Jan-26	1,821	5.02
2-Jul-25	2,737	0.55	2-Jan-26	1,515	23.07
3-Jul-25	2,646	41.13	3-Jan-26	2,576	6.01
4-Jul-25	3,339	0	4-Jan-26	2,355	0
5-Jul-25	3,651	6.11	5-Jan-26	1,701	0
6-Jul-25	3,162	0	6-Jan-26	1,580	0
7-Jul-25	3,741	0.56	7-Jan-26	1,303	0
8-Jul-25	3,677	0	8-Jan-26	1,682	0
9-Jul-25	2,753	2.78	9-Jan-26	1,367	0
10-Jul-25	1,756	12.22	10-Jan-26	1,418	0
11-Jul-25	3,911	48.91	11-Jan-26	1,771	0
12-Jul-25	3,865	2.22	12-Jan-26	1,327	0
13-Jul-25	3,867	1.11	13-Jan-26	1,330	0
14-Jul-25	3,508	0	14-Jan-26	1,363	6.52
15-Jul-25	2,751	4.45	15-Jan-26	2,135	37.11
16-Jul-25	3,186	1.67	16-Jan-26	2,635	5.52
17-Jul-25	3,811	26.67	17-Jan-26	2,616	0
18-Jul-25	3,867	1.11	18-Jan-26	2,666	22.06
19-Jul-25	3,381	0	19-Jan-26	2,396	4.51
20-Jul-25	2,751	0.56	20-Jan-26	3,198	13.04
21-Jul-25	2,734	0	21-Jan-26	3,560	111.83
22-Jul-25	2,741	0	22-Jan-26	3,405	2
23-Jul-25	2,718	0	23-Jan-26	3,739	4.01
24-Jul-25	2,724	0	24-Jan-26	3,799	2.51
25-Jul-25	2,752	0	25-Jan-26	3,572	2.01
26-Jul-25	2,717	0	26-Jan-26	3,641	1
27-Jul-25	2,752	0	27-Jan-26	3,408	0.5
28-Jul-25	2,555	0	28-Jan-26	3,732	0
29-Jul-25	3,641	72.62	29-Jan-26	2,730	0
30-Jul-25	3,888	1.57	30-Jan-26	2,673	0
31-Jul-25	3,780	0	31-Jan-26	2,724	0
1-Aug-25	3,661	0.52	1-Feb-26	2,683	0
2-Aug-25	2,752	0	2-Feb-26	2,322	12.01

Date	Effluent volume (m^3)	Rainfall (mm/day)	Date (continued)	Effluent volume (m^3)	Rainfall (mm/day)
3-Aug-25	2,724	0	3-Feb-26	2,042	1.94
4-Aug-25	2,105	0	4-Feb-26	1,882	5.28
5-Aug-25	2,752	0	5-Feb-26	1,453	0
6-Aug-25	2,733	0.53	6-Feb-26	1,599	0.48
7-Aug-25	2,752	2.09	7-Feb-26	1,844	0
8-Aug-25	2,680	15.15	8-Feb-26	1,608	0
9-Aug-25	2,752	1.04	9-Feb-26	1,294	0
10-Aug-25	2,704	0	10-Feb-26	1,627	0
11-Aug-25	2,447	0	11-Feb-26	1,739	0
12-Aug-25	2,508	0	12-Feb-26	1,391	0
13-Aug-25	2,346	0	13-Feb-26	1,777	18.76
14-Aug-25	2,274	0	14-Feb-26	1,917	0.96
15-Aug-25	2,329	0	15-Feb-26	1,852	0
16-Aug-25	2,526	7.32	16-Feb-26	1,770	0
17-Aug-25	2,328	5.22	17-Feb-26	2,081	0.96
18-Aug-25	2,742	4.7	18-Feb-26	1,431	0
19-Aug-25	2,309	19.34	19-Feb-26	1,713	0.48
20-Aug-25	2,753	0	20-Feb-26	1,713	0
21-Aug-25	2,007	0	21-Feb-26	1,544	0
22-Aug-25	2,752	0	22-Feb-26	1,597	0
23-Aug-25	2,751	0	23-Feb-26	1,625	0
24-Aug-25	2,752	0	24-Feb-26	1,316	0
25-Aug-25	2,640	0.52	25-Feb-26	1,352	0
26-Aug-25	2,732	0	26-Feb-26	1,646	0
27-Aug-25	2,099	0	27-Feb-26	1,214	0
28-Aug-25	2,067	0	28-Feb-26	1,483	1.44
29-Aug-25	2,659	6.79	1-Mar-26	1,891	0.96
30-Aug-25	2,207	5.75	2-Mar-26	1,335	0
31-Aug-25	2,754	6.27	3-Mar-26	1,756	0
1-Sept-25	2,242	1.04	4-Mar-26	1,324	0
2-Sept-25	2,729	0.52	5-Mar-26	1,649	0
3-Sept-25	2,752	0.53	6-Mar-26	1,341	0
4-Sept-25	2,701	0	7-Mar-26	1,463	0
5-Sept-25	2,602	0	8-Mar-26	1,859	0

Date	Effluent volume (m^3)	Rainfall (mm/day)	Date (continued)	Effluent volume (m^3)	Rainfall (mm/day)
6-Sept-25	2,448	10.45	9-Mar-26	1,289	0
7-Sept-25	2,634	2.61	10-Mar-26	1,573	0
8-Sept-25	2,014	0	11-Mar-26	1,558	2.4
9-Sept-25	1,835	0	12-Mar-26	1,294	0
10-Sept-25	2,008	3.13	13-Mar-26	1,628	3.85
11-Sept-25	2,637	8.36	14-Mar-26	1,460	0.48
12-Sept-25	3,450	20.9	15-Mar-26	1,837	0
13-Sept-25	3,714	3.14	16-Mar-26	1,120	0
14-Sept-25	2,752	1.04	17-Mar-26	1,501	0
15-Sept-25	2,545	0	18-Mar-26	1,274	0
16-Sept-25	2,753	0	19-Mar-26	1,503	0
17-Sept-25	2,555	0	20-Mar-26	1,296	0
18-Sept-25	2,561	10.45	21-Mar-26	1,376	0
19-Sept-25	2,743	1.57	22-Mar-26	1,797	0
20-Sept-25	2,222	0	23-Mar-26	1,034	1.04
21-Sept-25	1,776	0	24-Mar-26	1,332	0
22-Sept-25	2,205	0	25-Mar-26	1,662	3.63
23-Sept-25	1,826	13.58	26-Mar-26	2,339	123
24-Sept-25	2,751	43.37	27-Mar-26	3,550	13.49
25-Sept-25	2,745	3.13	28-Mar-26	3,922	0
26-Sept-25	2,754	0	29-Mar-26	3,829	1.04
27-Sept-25	2,685	5.75	30-Mar-26	3,645	2.07
28-Sept-25	2,628	0	31-Mar-26	2,753	0.52
29-Sept-25	2,596	3.64	1-Apr-26	2,751	0
30-Sept-25	2,752	0	2-Apr-26	2,627	0
1-Oct-25	2,708	0	3-Apr-26	2,692	0
2-Oct-25	2,732	0	4-Apr-26	1,854	0
3-Oct-25	2,726	25.47	5-Apr-26	1,417	0
4-Oct-25	2,736	11.44	6-Apr-26	1,598	1.04
5-Oct-25	2,739	0.52	7-Apr-26	1,674	14.53
6-Oct-25	2,559	3.12	8-Apr-26	2,662	29.58
7-Oct-25	2,750	8.31	9-Apr-26	2,723	0
8-Oct-25	2,703	0	10-Apr-26	2,526	0
9-Oct-25	2,752	0	11-Apr-26	2,649	9.86

Date	Effluent volume (m^3)	Rainfall (mm/day)	Date (continued)	Effluent volume (m^3)	Rainfall (mm/day)
10-Oct-25	2,752	0	12-Apr-26	2,845	56.05
11-Oct-25	2,708	0	13-Apr-26	3,635	11.42
12-Oct-25	2,752	0	14-Apr-26	3,835	3.11
13-Oct-25	2,567	2.6	15-Apr-26	3,820	14.01
14-Oct-25	2,750	37.95	16-Apr-26	3,760	3.12
15-Oct-25	2,744	0	17-Apr-26	3,761	0
16-Oct-25	2,751	0	18-Apr-26	3,742	0
17-Oct-25	2,743	0	19-Apr-26	3,824	24.91
18-Oct-25	2,744	0	20-Apr-26	3,773	1.04
19-Oct-25	2,343	0	21-Apr-26	3,765	0
20-Oct-25	1,216	0	22-Apr-26	3,683	0
21-Oct-25	2,184	0	23-Apr-26	3,561	5.19
22-Oct-25	2,723	10.92	24-Apr-26	3,731	7.78
23-Oct-25	2,680	15.59	25-Apr-26	2,682	0.52
24-Oct-25	2,753	3.12	26-Apr-26	2,689	0
25-Oct-25	2,649	0.52	27-Apr-26	2,751	0
26-Oct-25	2,750	1.04	28-Apr-26	2,371	0
27-Oct-25	2,703	1.56	29-Apr-26	2,227	0
28-Oct-25	2,527	16.64	30-Apr-26	2,527	0
29-Oct-25	2,707	0	1-May-26	2,465	0
30-Oct-25	2,122	0	2-May-26	2,320	0
31-Oct-25	2,553	0	3-May-26	1,772	0
1-Nov-25	2,668	0	4-May-26	1,358	0
2-Nov-25	2,752	0	5-May-26	1,820	0
3-Nov-25	1,457	0	6-May-26	1,856	0
4-Nov-25	1,761	0	7-May-26	1,391	0
5-Nov-25	1,497	0	8-May-26	1,520	0.52
6-Nov-25	1,992	0	9-May-26	2,019	10.38
7-Nov-25	1,525	0	10-May-26	1,788	2.07
8-Nov-25	1,601	0	11-May-26	1,485	1.56
9-Nov-25	2,754	15.59	12-May-26	1,938	0.52
10-Nov-25	2,576	17.68	13-May-26	1,706	0
11-Nov-25	2,648	3.64	14-May-26	1,419	0
12-Nov-25	2,638	22.87	15-May-26	1,670	0

Date	Effluent volume (m^3)	Rainfall (mm/day)	Date (continued)	Effluent volume (m^3)	Rainfall (mm/day)
13-Nov-25	2,636	2.08	16-May-26	1,899	0
14-Nov-25	2,665	0	17-May-26	1,679	0
15-Nov-25	2,662	4.68	18-May-26	1,418	0
16-Nov-25	2,693	0	19-May-26	1,779	0
17-Nov-25	2,401	0	20-May-26	1,405	0
18-Nov-25	2,683	44.7	21-May-26	1,657	0
19-Nov-25	2,883	7.8	22-May-26	1,329	0
20-Nov-25	3,822	0.52	23-May-26	1,714	0
21-Nov-25	2,752	0	24-May-26	1,584	0
22-Nov-25	2,620	0	25-May-26	1,271	0
23-Nov-25	2,707	0	26-May-26	1,666	0
24-Nov-25	2,680	0	27-May-26	1,594	1.01
25-Nov-25	2,617	0	28-May-26	1,312	0.51
26-Nov-25	2,400	0	29-May-26	1,605	0
27-Nov-25	2,669	0	30-May-26	1,387	0
28-Nov-25	2,618	1	31-May-26	1,653	0.5
29-Nov-25	2,638	0	1-Jun-26	1,540	7.07
30-Nov-25	2,668	17.05	2-Jun-26	3,205	32.85
1-Dec-25	2,094	0	3-Jun-26	2,327	7.58
2-Dec-25	2,470	12.54	4-Jun-26	2,658	1.51
3-Dec-25	2,895	31.59	5-Jun-26	2,152	10.11
4-Dec-25	4,411	2.01	6-Jun-26	2,582	5.56
5-Dec-25	2,672	0	7-Jun-26	2,673	1.01
6-Dec-25	2,659	0	8-Jun-26	2,546	1.01
7-Dec-25	2,643	0	9-Jun-26	2,752	0
8-Dec-25	1,518	0	10-Jun-26	2,603	0
9-Dec-25	2,538	0	11-Jun-26	2,640	0
10-Dec-25	1,895	0	12-Jun-26	2,515	0
11-Dec-25	1,515	0	13-Jun-26	2,714	0
12-Dec-25	1,756	0	14-Jun-26	2,627	0
13-Dec-25	1,584	0	15-Jun-26	2,040	0.5
14-Dec-25	1,539	0	16-Jun-26	2,640	3.54
15-Dec-25	1,717	0	17-Jun-26	1,654	0.5
16-Dec-25	1,455	8.52	18-Jun-26	1,934	0.51

Date	Effluent volume (m^3)	Rainfall (mm/day)	Date (continued)	Effluent volume (m^3)	Rainfall (mm/day)
17-Dec-25	1,397	1	19-Jun-26	1,541	0
18-Dec-25	2,382	0	20-Jun-26	1,842	0
19-Dec-25	1,529	1.01	21-Jun-26	1,634	1.01
20-Dec-25	1,514	4.01	22-Jun-26	1,806	0.51
21-Dec-25	1,587	0	23-Jun-26	1,606	1.01
22-Dec-25	1,535	0.5	24-Jun-26	2,499	92.46
23-Dec-25	1,691	0.5	25-Jun-26	3,664	1.52
24-Dec-25	1,577	2.51	26-Jun-26	3,812	5.05
25-Dec-25	1,847	0	27-Jun-26	3,767	0
26-Dec-25	1,379	1	28-Jun-26	2,751	0
27-Dec-25	1,318	1.51	29-Jun-26	2,248	0
28-Dec-25	1,637	0.5	30-Jun-26	2,672	0
29-Dec-25	1,309	5.01			
30-Dec-25	1,783	7.02			
31-Dec-25	1,371	0.5			

WWTP effluent monitoring

Date	E. coli	F. coliforms	cBOD	NO_3-N	NO_X-N	DRP	pH	NH_3-N	TSS
	cfu/100mL	cfu/100mL	mg O_2/L	mg/L	mg/L	mg/L		mg/L N	mg/L
2-Jul-25	1.6	1.6	0.78	5.73	6.10	0.258	6.70	0.08	3.40
4-Jul-25	1.6	1.6	-	-	-	-	-	-	-
7-Jul-25	1.6	1.6	-	-	-	-	-	-	-
8-Jul-25	1.7	1.7	0.9	6.34	6.70	0.351	6.80	0.15	4.40
9-Jul-25	1.6	1.6	0.91	6.55	6.80	0.196	6.60	0.03	3.20
11-Jul-25	3.3	1.6	-	-	-	-	-	-	-
14-Jul-25	68.00	60.00	-	-	-	-	-	-	-
16-Jul-25	8.20	11.00	1.7	5.25	6.00	0.302	6.70	0.04	7.20
17-Jul-25	1.6	1.6	-	-	-	-	-	-	-
18-Jul-25	1.6	1.6	-	-	-	-	-	-	-
19-Jul-25	1.6	1.6	-	-	-	-	-	-	-
23-Jul-25	3.3	1.6	1	5.23	5.80	0.428	6.50	0.08	3.20
29-Jul-25	1.6	1.6	-	-	-	-	-	-	-
30-Jul-25	1.6	3.3	1.6	4.83	5.20	0.326	6.60	0.12	2.40
31-Jul-25	1.6	1.6	-	-	-	-	-	-	-
1-Aug-25	1.6	1.6	0.87	6.43	6.50	0.428	6.70	0.02	1.60
6-Aug-25	1.6	1.6	1.5	5.91	5.90	0.231	6.80	0.03	5.20
13-Aug-25	1.6	1.6	1.3	5.86	5.90	0.185	6.70	0.03	4.40
20-Aug-25	1.6	1.6	1.5	6.38	6.40	0.238	6.60	0.03	4.80
27-Aug-25	1.7	1.7	1.2	6.42	6.40	0.171	6.80	0.03	5.60
3-Sept-25	1.6	1.6	1.1	6.41	6.40	0.276	6.60	0.03	5.00
10-Sept-25	1.6	3.3	0.87	7.06	7.10	0.133	6.80	0.03	1.00
12-Sept-25	1.7	1.7	0.7	7.39	7.40	0.489	6.90	0.02	1.00
13-Sept-25	1.7	1.7	-	-	-	-	-	-	-
17-Sept-25	1.6	1.6	0.85	7.41	7.40	0.331	6.80	0.03	3.80
24-Sept-25	1.6	8.20	1.5	7.26	7.30	0.397	6.80	0.03	2.00
1-Oct-25	1.6	1.60	0.62	7.02	7.00	0.107	6.80	0.02	1.80
8-Oct-25	1.7	1.70	0.87	6.49	6.50	0.148	6.80	0.02	3.40
15-Oct-25	1.6	3.30	2	6.90	6.90	0.546	6.70	0.02	8.40
22-Oct-25	1.7	1.70	0.93	6.63	6.60	0.293	6.90	0.02	2.00
29-Oct-25	1.6	1.60	0.66	6.70	6.70	0.304	7.00	0.02	3.20
5-Nov-25	1.7	1.70	1	6.44	6.40	0.229	6.70	0.02	5.80
12-Nov-25	1.6	1.60	0.5	6.35	6.70	0.264	6.90	0.02	1.00
19-Nov-25	12.0	6.70	1.6	5.34	6.60	0.427	6.70	0.04	3.00
20-Nov-25	42.0	44.00	-	-	-	-	-	-	-
26-Nov-25	1.6	1.60	1.7	4.50	4.90	0.216	7.00	2.40	2.80
3-Dec-25	6.6	3.30	2	4.76	6.50	0.411	6.90	2.40	5.20
4-Dec-25	100.0	110.00	1.9	4.54	6.80	0.767	6.70	0.07	6.40

8-Dec-25	1.6	1.60	0.5	4.93	4.90	0.252	7.10	0.02	4.00
10-Dec-25	1.6	1.60	1.1	0.33	0.45	0.265	7.10	6.60	8.00
17-Dec-25	1.7	1.70	0.73	5.34	5.60	0.034	7.00	0.12	1.40
24-Dec-25	3.3	3.30	3.09	4.51	4.50	0.019	7.00	0.03	2.40
31-Dec-25	1.6	1.60	0.91	6.24	6.20	0.014	7.00	0.03	3.00
7-Jan-26	1.7	1.6	0.55	6.57	6.60	0.027	6.90	0.03	1.00
14-Jan-26	8.2	11.0	1.3	7.41	7.40	0.369	7.10	0.03	5.80
21-Jan-26	1.6	1.6	0.75	8.04	8.00	0.292	6.70	0.02	3.00
22-Jan-26	1.6	1.6	-	-	-	-	-	-	-
23-Jan-26	1.6	1.6	0.55	6.72	6.70	0.408	6.60	0.03	1.40
24-Jan-26	1.6	1.6	-	-	-	-	-	-	-
25-Jan-26	1.6	1.6	-	-	-	-	-	-	-
26-Jan-26	1.6	1.6	-	-	-	-	-	-	-
27-Jan-26	1.6	1.6	0.68	4.46	4.50	0.133	7.10	0.03	2.60
28-Jan-26	1.7	8.3	1.1	6.18	6.20	0.180	7.00	0.03	3.00
4-Feb-26	1.7	1.7	0.61	5.90	5.90	0.163	6.80	0.02	1.40
11-Feb-26	3.3	1.6	2	7.01	7.00	0.140	7.40	0.02	4.60
18-Feb-26	1.7	6.7	0.82	4.04	5.20	0.103	6.80	0.04	2.60
25-Feb-26	3.3	1.6	0.73	6.32	6.30	0.085	7.00	0.02	2.60
4-Mar-26	1.6	1.6	0.78	3.13	4.40	0.075	6.90	0.02	3.40
11-Mar-26	1.7	1.7	1	3.68	4.70	0.170	7.20	0.03	5.20
18-Mar-26	1.6	1.6	2	3.02	4.10	0.045	7.00	0.04	1.80
25-Mar-26	1.7	3.3	0.68	7.03	7.10	0.037	6.90	0.03	6.60
27-Mar-26	36.0	43.0	-	-	-	-	-	-	-
28-Mar-26	1.7	1.7	-	-	-	-	-	-	-
29-Mar-26	1.6	1.6	-	-	-	-	-	-	-
30-Mar-26	1.6	1.6	0.78	3.89	-	0.044	7.10	0.04	6.80
1-Apr-26	1.6	1.6	1.1	3.42	4.30	0.150	7.00	0.02	8.40
8-Apr-26	56.0	68.0	1.7	2.43	4.90	0.340	6.90	4.20	1.60
10-Apr-26	1.6	4.9	-	-	-	-	-	-	-
13-Apr-26	1.6	1.6	-	-	-	-	-	-	-
14-Apr-26	1.6	1.6	0.89	1.20	4.80	0.220	6.90	0.03	2.00
15-Apr-26	26.0	15.0	1.7	2.44	7.20	0.520	6.70	0.04	4.80
16-Apr-26	1.6	8.2	-	-	-	-	-	-	-
17-Apr-26	1.6	9.8	0.83	9.26	9.30	0.057	6.80	0.02	5.00
18-Apr-26	1.6	1.6	-	-	-	-	-	-	-
19-Apr-26	1.6	1.6	-	-	-	-	-	-	-
20-Apr-26	1.6	1.6	-	-	-	-	-	-	-
21-Apr-26	1.6	1.6	1.9	5.85	6.60	0.240	7.00	0.05	4.80
22-Apr-26	1.6	1.6	1.5	8.95	8.90	0.100	6.70	0.02	4.40
23-Apr-26	1.6	1.6	-	-	-	-	-	-	-

24-Apr-26	100.0	200.0	-	-	-	-	-	-	-
26-Apr-26	1.6	1.6	-	-	-	-	-	-	-
29-Apr-26	1.6	1.6	0.88	6.28	6.30	0.092	6.90	0.02	2.80
6-May-26	1.7	1.7	0.94	7.78	7.80	0.130	6.70	0.02	4.20
13-May-26	1.6	3.3	0.87	4.43	5.20	0.130	6.70	0.03	1.40
20-May-26	1.6	1.6	1.1	2.38	3.40	0.057	7.00	0.03	2.20
27-May-26	1.6	4.9	1.1	2.82	4.20	0.039	7.00	0.03	1.40
3-Jun-26	1.6	1.6	1.5	4.90	6.50	0.260	6.80	0.04	6.80
10-Jun-26	1.6	1.6	0.59	4.66	5.00	0.210	6.90	0.02	4.40
17-Jun-26	1.6	1.6	0.78	5.81	6.30	0.170	6.80	0.03	6.00
24-Jun-26	3.3	1.6	0.84	5.23	6.10	0.270	6.80	0.03	3.80
25-Jun-26	33.0	23.0	1.1	4.02	6.00	0.910	6.60	0.04	3.40
26-Jun-26	42.0	56.0	1.5	7.71	9.80	0.380	6.60	0.02	2.80
27-Jun-26	3.3	4.9	-	-	-	-	-	-	-

Farm pond monitoring

Date	NO_2-N mg/L	NO_3-N mg/L N	NO_X-N mg/L	DRP mg/L	TKN mg/L N	NH_3-N mg/L	Tot-P mg/L	TSS mg/L
2-Jul-25	0.04	3.82	3.9	0.213	1.4	0.1	0.342	9
9-Jul-25	0.1	5.58	5.7	0.321	0.9	0.2	0.409	6.4
16-Jul-25	0.03	3.02	3.1	0.172	0.85	0.12	0.308	8.6
23-Jul-25	0.05	4.33	4.4	0.185	0.73	0.095	0.269	4.4
30-Jul-25	0.04	1.53	1.6	0.128	0.98	0.083	0.264	62.4
6-Aug-25	0.02	4.44	4.4	0.17	0.85	0.077	0.264	6.8
13-Aug-25	0.02	3.98	4	0.197	0.82	0.06	0.269	4.4
20-Aug-25	0.03	2.87	2.9	0.227	1.2	0.13	0.395	35
27-Aug-25	0.02	4.62	4.6	0.244	1.1	0.067	0.397	7.6
3-Sept-25	0.03	4.25	4.3	0.299	1.1	0.062	0.397	4.6
10-Sept-25	0.02	4.36	4.4	0.211	0.64	0.08	0.291	3
17-Sept-25	0.02	5.18	5.2	0.206	0.82	0.053	0.275	4.2
24-Sept-25	0.03	4.78	4.8	0.172	0.93	0.079	0.269	5.4
1-Oct-25	0.04	3.93	4	0.199	0.92	0.13	0.285	2.6
8-Oct-25	0.04	3.34	3.4	0.213	1	0.23	0.315	4.8
15-Oct-25	0.03	2.41	2.4	0.247	1.4	0.22	0.384	22
22-Oct-25	0.05	3.34	3.4	0.255	1.2	0.079	0.378	5.4
29-Oct-25	0.08	3.55	3.6	0.312	0.84	0.15	0.43	4.8
5-Nov-25	0.04	3.36	3.4	0.271	0.98	0.087	0.335	5.2
12-Nov-25	0.18	3.36	3.5	0.334	1.2	0.2	0.433	3.4
19-Nov-25	0.21	3.41	3.6	0.264	1.3	0.51	0.394	3
26-Nov-25	0.09	3.15	3.2	0.3	1.3	0.28	0.429	3.6
3-Dec-25	0.11	3.2	3.3	0.259	2	0.11	0.357	4
10-Dec-25	0.12	2.59	2.7	0.276	1	0.18	0.366	5.4
17-Dec-25	0.2	2	2.2	0.223	1.2	0.67	0.383	2.8
24-Dec-25	0.05	1.44	1.5	0.125	1.1	0.25	0.201	7
31-Dec-25	0.05	1.78	1.8	0.079	1.1	0.33	0.17	4.4
7-Jan-26	0.1	3.2	3.3	0.112	0.77	0.17	0.191	1
14-Jan-26	0.08	3.78	3.9	0.083	1.1	0.13	0.175	7
21-Jan-26	0.07	4.14	4.2	0.264	1.1	0.18	0.372	1
28-Jan-26	0.06	5.73	5.8	0.274	0.79	0.16	0.31	4.2
4-Feb-26	0.09	2.35	2.4	0.315	0.88	0.082	0.416	6.2
11-Feb-26	0.04	3.7	3.7	0.201	0.81	0.029	0.255	8.4
18-Feb-26	0.13	2.89	3	0.182	0.9	0.12	0.254	7.4
25-Feb-26	0.11	3.06	3.2	0.146	0.89	0.051	0.208	5.2
4-Mar-26	0.14	2.88	3	0.1	0.82	0.095	0.16	3.8
11-Mar-26	0.19	3.58	3.8	0.082	0.9	0.13	0.17	20.6
18-Mar-26	0.27	2.53	2.8	0.11	0.86	0.17	0.21	14

Date	NO_2-N	NO_3-N	NO_X-N	DRP	TKN	NH_3-N	Tot-P	TSS
	mg/L	mg/L N	mg/L	mg/L	mg/L N	mg/L	mg/L	mg/L
25-Mar-26	0.13	2.07	2.2	0.054	1	0.29	0.16	14
1-Apr-26	0.49	2.36	2.9	0.17	0.89	0.38	0.29	15
8-Apr-26	0.14	2.31	2.5	0.078	0.72	0.15	0.14	1.8
15-Apr-26	0.83	1.42	2.2	0.17	0.98	0.2	0.29	9.4
22-Apr-26	0.07	4.88	5	0.14	0.97	0.14	0.24	6.8
29-Apr-26	0.06	4.27	4.3	0.11	0.84	0.082	0.22	7
6-May-26	0.04	4.5	4.5	0.13	1.2	0.12	0.21	6.4
13-May-26	0.1	3.63	3.7	0.17	0.85	0.1	0.26	7
20-May-26	0.06	2.19	2.3	0.087	0.83	0.081	0.17	9.2
27-May-26	0.08	2.23	2.3	0.058	0.65	0.05	0.11	8
3-Jun-26	0.72	4	4.7	0.29	1	0.12	0.39	8.6
10-Jun-26	0.08	3.47	3.6	0.19	0.97	0.16	0.33	7
17-Jun-26	0.13	3.91	4	0.21	0.83	0.13	0.33	7.4
24-Jun-26	0.1	4.12	4.2	0.1	0.8	0.08	0.25	8.6

Appendix B. Data Sources

Table B1: Download location of environmental monitoring data used in this report

Category	Parameter	Source platform	Tag/ID
Effluent volume	N/A	Pi	DTBEA_48_FQ_001_VOLUMEDAY
Rainfall	N/A	Hydrotel	DTBEA – Beachlands WWTP RG; 09_RG_01_RainGauge
Effluent quality	*Escherichia coli*	Pi	DTBEA_48_13_UV_ECOLMTEC
Effluent quality	Faecal Coliforms	Pi	DTBEA_48_13_UV_FC
Effluent quality	cBOD5	Pi	DTBEA_48_13_UVE_BOD
Effluent quality	Nitrate	Pi	DTBEA_48_13_UVE_NO3
Effluent quality	Ammoniacal Nitrogen	Pi	DTBEA_48_13_UVE_TNH3N
Effluent quality	Soluble Reactive Phosphorus	Pi	DTBEA_48_13_UVE_P
Effluent quality	pH	Pi	DTBEA_48_13_UVE_pH
Effluent quality	Total Suspended Solids	Pi	DTBEA_48_13_UVE_TSS
Biofilter	Moisture	Pi	DTBEA_35_BIOFILTER_moisture
Biofilter	pH	Pi	DTBEA_35_BIOFILTER_pH