



Bombay Wastewater Treatment Plant 2024-2025 Annual Report

Final - September 2025

Watercare 

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Rev	Revision Date	Name	Position	Signature
1	05/09/2025	Michiel Jonker	Environmental Care Manager	
2	15/09/2025	Iris Tschardtke	Operations Controller	
3	29/09/2025	Jonathan Piggot	Head of Wastewater	

Approved


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

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ABBREVIATIONS

Abbreviation	Description
cBOD ₅	5-day carbonaceous biochemical oxygen demand
TSS	Total suspended solids
WWTP	Wastewater treatment plant

1 INTRODUCTION

This report covers resource consent compliance for the Bombay Wastewater Treatment Plant (WWTP) from 1 July 2024 to 30 June 2025. The Bombay WWTP has a single resource consent, permit R/REG/2014/2424 for discharges to land, with an associated management plan (2014). The report includes:

- Description of the WWTP
- Plant performance including:
 - Flow monitoring
 - Effluent quality
 - Maintenance service records; and
 - Complaints
- Summary of compliance

2 TREATMENT PLANT

2.1 Current operation

The Bombay WWTP is on Barber Road, Bombay. The WWTP is a septic tank treatment system with land disposal that consists of the following treatment devices and processes for treatment of wastewater and management of septage:

- Septic tanks
- A designated irrigation field of 3,000 m² (including reserved area)
- Sludge removal by sucker truck and disposal at Pukekohe WWTP when required.

Treated effluent discharges via perforated pipes buried in trenches filled with gravel. The treated effluent is slowly absorbed and filtered by the ground in the irrigation field. The septic tanks require removal of sludge every 3 to 4 years, most recently undertaken on 16 April 2024.

Visual assessment of the plant performance is conducted periodically by a plant operator. Dip measurement of the sludge level occurs every six months.

2.2 Changes in 2024-2025

There were no changes to the WWTP in 2024-2025.

2.3 Future changes

Watercare has no planned changes for 2025-2026.

3 COMPLIANCE

3.1 Introduction

The assessment of 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 the 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, 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 effects.
Category 3	Watercare has not complied with the consent condition. Watercare has assessed the non-compliance as having the potential to result in 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 Plant performance

3.2.1 Water use

Consent condition 28 requires the water supply meters to be read and recorded quarterly. Watercare reads the water supply meters located at house numbers 141 – 163 Barber Road every two months.

Table 3-2 lists water meter readings taken from 1 July 2024 to 30 June 2025 and the subsequent calculated daily water usage and discharge at the WWTP. The average water supply to the community for the reporting period was 2.18 m³/day, below the consent discharge limit of 5.4 m³/day and consistent with the previous year (2.23 m³/day). No additional septic tank units are currently required.

Table 3-2: Bombay water meter readings (m³) for each ID taken within the reporting period, and calculated daily water usage (m³/day)

Property	Aug-24	Oct-24	Dec-24	Feb-25	Apr-25	Jun-25
141 Barber Road ID: X17A691074	881	900	919	948	969	990
145 Barber Road ID: X17A691068	356	356	363	372	380	380
147 Barber Road ID: X17A691076	374	395	420	466	495	521
149 Barber Road ID: X17A691169	2355	2379	2401	2439	2466	2490
151 Barber Road ID: X17A691075	581	584	589	593	596	599
159 Barber Road ID: X17A691066	790	819	846	865	888	907
163 Barber Road ID: X17A691070	690	701	701	722	743	766
Calculated daily water usage and discharge (m ³ /day)	2.60	1.18	1.91	2.59	2.20	1.93

3.2.2 Effluent quality

Table 3-3 summarises monthly test results for biochemical oxygen demand and total suspended solids during the 2024-2025 monitoring period, and the raw data is in Table 3-4. The samples are taken from the filter outlet of the last septic tank. The results show cBOD₅ was typically above the expected range as advised in the consent. Some individual results for both cBOD₅ and TSS were within the expected ranges, but some results exceeded this. Currently, as discussed in Section 2.3, Based on flows, absence of ponding/breakout, and maintenance history, no additional septic tank units are required at this time, and we will continue monitoring.

Table 3-3: Bombay WWTP effluent quality summary average, range and expected range for cBOD₅ and TSS for the reporting period July 2024 to June 2025

Parameter	Average	Range	Expected range ¹	% within expected range
cBOD ₅ (mg O ₂ /L)	176	83-210	70-150	17% (2/12)
TSS (mg/L)	91	48-164	30-110	83% (10/12)

Table 3-4: Effluent quality results for cBOD₅ and TSS for the monitoring period Jul 2024 to Jun 2025

Date	cBOD ₅ (mg O ₂ /L)	TSS (mg/L)
3/07/2024	170	55
7/08/2024	200	110

¹ Expected ranges are advisory per consent advice note for septic tank.

4/09/2024		200	72
2/10/2024		210	110
6/11/2024		190	95
4/12/2024		160	48
8/01/2025		83	87
5/02/2025		190	75
5/03/2025		180	66
2/04/2025		210	116
7/05/2025		120	99
4/06/2025		200	164

3.2.3 Maintenance records

The sludge from the septic tanks was most recently removed on 16 April 2024, which was reported upon in the 2023-2024 annual report.

3.3 Complaints and incidents

There were no notable incidents at the Bombay WWTP between July 2024 and June 2025. The WWTP did not receive any complaints related to its operation or maintenance.

3.4 Summary of compliance

Table 3-5 lists a condition-by-condition compliance check for the Bombay WWTP. The WWTP was assessed as **Category 1** in 2024-2025 (fully compliant).

Table 3-5: Discharge to land compliance assessment (R/REG/2014/2424)

Condition Number	Consent Condition Bombay Discharge to Land (#R/REG/2014/2424)	Compliance Rating	Comments
01	This consent shall expire on 31 September 2029 ² unless it has lapsed, been surrendered or been cancelled at an earlier date.	1	Ongoing.
02	The wastewater treatment and land disposal system shall be constructed and installed in accordance with the conditions of this permit and in accordance with the following plans, specifications and any further information later submitted to the Council as part of this application: SEE CONSENT FOR DETAILS	1	Compliant.
03	<p>The key components of the wastewater treatment system shall be consistent with those described in the application and shall comprise at least the following minimum components, dimensions and standards:</p> <p>i. Wastewater treatment plant consisting of: (2x) 4,500 litre septic tanks (1x) Septic tank outlet filter (proprietary filter) (1x) Water use flow meter (+/- 5% accuracy)</p> <p>ii. Wastewater disposal system consisting of: (1x) 1,500m² primary effluent disposal field with shallow trenches. The peak hydraulic loading rate will be 4.7mm/day. (1x) 1,500m² reserve effluent disposal area (100%). The peak hydraulic loading rate is 4.7mm/day. provided that equivalent components, dimensions and standards may be used that achieve similar or better performance standards if such are first approved in writing by the Team Leader, Specialist Integration Unit, Auckland Council.</p>	1	Compliant.
04	<p>Under section 125 of the Act, this consent will lapse five years after the date of its commencement unless:</p> <p>(a) The consent is given effect to; or (b) The Council extends the period after which the consent will lapse.</p>	1	Compliant.

² 31 September is not a valid date. It is assumed the consent condition should refer to 30 September 2029.

Condition Number	Consent Condition Bombay Discharge to Land (#R/REG/2014/2424)	Compliance Rating	Comments
05	This consent (or any part thereof) shall not commence until such time as the following charges, owing at the time this decision is notified, have been paid to the Council in full: a. All fixed charges relating to receiving, processing and granting this resource consent under section 36(1) of the Act ; and b. All additional charges imposed under section 36(3) to enable the Council to recover its actual and reasonable costs in respect of this application, being costs which are beyond challenge.	1	Compliant.
06	The consent holder shall pay any subsequent further charges imposed under section 36 of the Act relating to receiving, processing and granting this resource consent within 20 days of receipt of notification of a requirement to pay the same, provided that, in the case of any additional charges under section 36(3) that are subject to challenge, the consent holder shall pay such amount as is determined by that process to be due and owing, within 20 days of receipt of the relevant decision.	1	Compliant.
07	The consent holder shall pay the Council an initial consent compliance monitoring charge of \$500.00 (inclusive of GST), plus any further monitoring charge or charges to recover the actual and reasonable costs incurred to ensure compliance with the conditions of this consent.	1	Compliant.
08	The servants or agents of the Auckland Council shall be 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 in-person inspection by Compliance Officer undertaken on 15 March 2023.
09	The maximum discharge volume from the wastewater treatment systems to land shall not exceed 5.4 m ³ /day.	1	The annual average in 2024-2025 was 2.18 m ³ /day.
10	An outlet filter shall be installed on the final septic tank in series within 3 months of commencement of this consent. The primary and reserve effluent disposal areas shall be positioned in accordance with the plans and a minimum distance of at least 1.5 metres from property boundaries, 3 metres from buildings, and 20 metres from any stormwater drains that are downslope of the disposal field.	1	Completed.

Condition Number	Consent Condition Bombay Discharge to Land (#R/REG/2014/2424)	Compliance Rating	Comments
12	The existing effluent disposal field shall be renovated by removing weeds, a dense vegetative cover of grass or other suitable forage species shall be established and maintained within the effluent disposal field within 3 months of commencement of this consent. Written approval from the Team Leader, Specialist Integration Unit is required for any extension of time required for removal of weeds or planting to occur.	1	Ongoing.
13	The installation of any new components of the wastewater treatment and land disposal system shall be carried out under the supervision of a chartered professional engineer or appropriately qualified person experienced in wastewater treatment and land disposal systems.	1	Compliant.
14	The chartered professional engineer or appropriately qualified person is to certify to the Council in writing that all new components of the system have been designed, inspected and installed in accordance with standard engineering practice, with the approved plans, and with the specifications and conditions of this consent.	1	Compliant.
15	Final "as-built" plans of the wastewater treatment and land disposal system for the works covered by this permit shall be prepared that show the location of each key component of the treatment and land disposal system. The as-built plans shall be prepared to the satisfaction of the Team Leader, Specialist Integration Unit.	1	"As built" was incorporated in the Management Plan issued for approval in December 2014.
16	The consent holder shall contact the Team Leader, Specialist Integration Unit to organise a post-construction inspection of the wastewater treatment and land disposal system by an Auckland Council officer within 30 days of works completion (outlet filter installed and disposal field planted).	1	Completed.
17	The consent holder shall submit copies of each of the following: the engineer's certificate; 'as-built' plans; and management plan prepared in accordance with the conditions of this consent to the Team Leader, Specialist Integration Unit within 30 days of works completion and discharge commencing.	1	"As built" was incorporated in the Management Plan issued for approval in December 2014.
18	The discharges of effluent to land shall not result in: <ul style="list-style-type: none"> i. surface ponding of effluent within the land disposal field; or ii. channelling of effluent that results in overland runoff of effluent beyond the land disposal field; or iii. surface seepage (breakout) of effluent beyond the land disposal field. 	1	Ongoing.

Condition Number	Consent Condition Bombay Discharge to Land (#R/REG/2014/2424)	Compliance Rating	Comments
19	The reserve effluent disposal field shall be protected and retained in a condition that does not prevent its use for effluent disposal (e.g. no buildings, drives or other development over the area)	1	Ongoing.
20	Written approval from the Team Leader, Specialist Integration Unit shall be obtained prior to use of the reserve effluent disposal field. The request for approval shall include: <ul style="list-style-type: none"> i. Reason that the reserve irrigation area is needed; ii. Assessment of the condition of the primary effluent irrigation area and any maintenance or other mitigation measures required to allow its continued use; iii. An assessment of discharge flow volumes on the site and an assessment of options to manage or reduce flows; iv. An assessment of effluent quality results and any need for upgrades to the wastewater treatment plant (e.g. installation of additional septic tanks); v. Specifications for design of the effluent distribution system; and vi. Updated site plan showing the proposed layout of the effluent distribution system within the allocated reserve area. 	1	Compliant.
21	The wastewater treatment system, including the treatment plant and land disposal field, shall be operated and maintained in good working order at all times.	1	Ongoing.
22	Fencing and signage around the perimeter of the wastewater treatment plant and effluent disposal field shall be maintained to discourage unauthorised access into these areas and prevent stock from damaging the system.	1	Completed.
23	Access to all wastewater system components, including the treatment plant and land disposal system, shall be maintained to enable system checks and maintenance to occur. This includes control (mowing) of vegetation within the effluent disposal field.	1	Ongoing.
24	Flushing of wastewater distribution lines shall be conducted in a manner that does not result in discharges of flushed water off of the property or into surface water.	1	Ongoing.

Condition Number	Consent Condition Bombay Discharge to Land (#R/REG/2014/2424)	Compliance Rating	Comments
25	<p>A management plan shall be prepared to the satisfaction of the Team Leader, Specialist Integration Unit by an appropriately qualified person experienced in wastewater engineering for the wastewater treatment and land disposal system that is consistent with the conditions of this consent and shall include, but not be limited to:</p> <ul style="list-style-type: none"> i. A description of the treatment system; ii. A copy of the as-built plans; iii. An inspection programme designed to verify the correct functioning of all components of the wastewater treatment and land disposal systems; iv. A schedule and checklist of maintenance requirements for all wastewater treatment system components including the treatment plant and land disposal system (e.g. solids removal, weed control, mowing, filter cleaning, flushing of lines, field inspection, replacement schedule, etc.); v. Names of appropriate people to contact in the event system malfunctions occur including contact telephone numbers; vi. A contingency plan of action to be taken in the event metered flows exceed maximum permitted discharge volumes and/or effluent breakout/surface runoff from the treatment and land disposal system. 	1	Management Plan was completed and issued for approval in December 2014.
26	The consent holder shall comply with the requirements of the approved management plan.	1	Compliant.
27	A copy of the approved management plan shall be held by the consent holder.	1	Compliant.
28	The water supply meters on each dwelling shall be read quarterly. These readings shall be recorded and copies of these records shall be retained by the consent holder.	1	Compliant.
29	Subject to written approval of the Team Leader, Specialist Integration Unit, the frequency of flow monitoring may be decreased. The Team Leader, Specialist Integration Unit reserves the right to require flow meter readings to recommence at any stage.	1	Compliant.
30	Copies of all maintenance service records shall be retained by the consent holder.	1	Ongoing.
31	Samples of primary treated wastewater shall be collected at the frequency and analysed for the parameters as specified in Table 1 below: SEE CONSENT FOR TABLE	1	Completed.

Condition Number	Consent Condition Bombay Discharge to Land (#R/REG/2014/2424)	Compliance Rating	Comments
32	All samples shall be collected and analysed in accordance with the latest edition of “Standard Methods for the Examination of Water and Wastewater”, American Public Health Association (APHA), Water Environment Federation (WEF), and the American Water Works Association (AWWA) or equivalent approved in writing by the Team Leader, Specialist Integration Unit.	1	Compliant.
33	Subject to written approval of the Team Leader, Specialist Integration Unit, the frequency of monitoring may be decreased/ceased. The Team Leader, Specialist Integration Unit reserves the right to require monitoring to recommence at any stage.	1	Compliant.
34	The consent holder shall submit the following information by 30 September annually to the Team Leader, Specialist Integration Unit for that reporting year (1 September through 31 August): i. Flow monitoring records; ii. Summary of effluent quality monitoring results and an assessment of the need to install additional septic tanks; iii. Maintenance service records; iv. Summary of any complaints or incidents; and v. An assessment of compliance with each consent condition.	1	Compliant. Reporting period is 1 July – 30 June each year.

Condition Number	Consent Condition Bombay Discharge to Land (#R/REG/2014/2424)	Compliance Rating	Comments
35	<p>The conditions of this consent may be reviewed by the Team Leader Specialist Integration Unit pursuant to section 128 of the Act, by giving notice pursuant to section 129, in March 2015 and every March thereafter in order:</p> <ul style="list-style-type: none"> i) To vary the size or design of the treatment system and/or size or design of the land disposal field in light of increased understanding of the system or further information, changed circumstances, or the results of monitoring; and/or ii) To alter monitoring requirements in light of previous monitoring results and/or changed environmental conditions or circumstances; and/or iii) To deal with any significant adverse effect on the environment which may arise from the exercise of the consent and which was not apparent at the time of the consent was granted; and/or iv) To require the consent holder to adopt the best practicable option to remove or reduce any adverse effect on the environment resulting from the discharge, including measures to decrease water usage and/or discharge flow volumes; and/or v) To deal with any adverse effect on the environment arising or potentially arising from the exercise of this consent, through altering or providing specific performance standards. 	1	Compliant.

Appendix A. Data Sources

Table 3-6: Download location and data tags of environmental monitoring data used in this report.

Category	Parameter	Source platform	Tag/ID
Effluent quality	cBOD ₅	Pi	DTBOM_25_2_EFF_BOD
Effluent quality	TSS	Pi	DTBOM_25_2_EFF_TSS
Effluent volume	Water meter readings	IPS (via Service Delivery)	N/A