

## Compliance monitoring assessment Otaki Wastewater Treatment Plant 2023-2024


Consent No:	WGN160002 [33564 & 33565]	Date: 19/11/2022	Monitoring officer: Kagan Morcom
Activity:	To discharge treated wastewater to land and contaminants to air from the operation of the Otaki Wastewater Treatment Plant.		

### Your Compliance Rating

This report assesses compliance for the period 1 July 2023 to 30 June 2024.

[33564] - Discharge permit to discharge treated wastewater to land.		<b>MINOR NON-COMPLIANCE</b> Most conditions met but several non-compliances. Action are required to ensure these issues are solved.
[33565] - Discharge permit to discharge contaminants to air from the treatment and disposal of wastewater.		

### Overall compliance summary for Otaki WWTP:

<b>GOOD</b> 	Overall good management of site and consents. The consent holder is generally efficient in meeting their consent requirements. There were some minor breaches of consent conditions and technical non-compliance, however the consent holder is operating within the scope of environmental effects and administrative requirements considered when their consents were issued. Many of the issues raised in this compliance report are in the process of being resolved.
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### Maximum Discharge Rate

**Condition 9** of the consent limits the discharge of effluent to the Land Discharge & Treatment Area (LDTA) to 2,820 m<sup>3</sup>/day. During the previous monitoring period there was one exceedance where the effluent flow exceeded 2,902 m<sup>3</sup>/day. During the current compliance period the WWTP has not had any exceedances of this daily flow limit thus is compliant with this condition.

### Maintaining Wet Weather Storage Capacity

**Condition 11** requires the consent holder to ensure that at least 5,000 m<sup>3</sup> of wet weather storage is available at all times. This condition also requires you to provide an assessment in the annual report comparing the actual inflow volumes to the wastewater treatment against the inflow volumes predicted in the resource consent application.

The 2023-2024 Annual Report fails to provide calculations showing the storage requirements for the forecasted flows as required by the consent.

In past years available capacity of the storm flow buffer pond was maintained at approximately 4,700m<sup>3</sup> due to 10% of the pond being occupied by “residual material” which was done intentionally to prevent the ponds liner from being displaced by groundwater. In the 2023-2024 Annual Report you state that the level settings for the pond were changed in September 2024 to ensure that the maximum volume in the storm flow buffer during normal weather conditions is 200m<sup>3</sup> leaving at least 5,000m<sup>3</sup> storage remaining. The annual report shows that there were numerous instances of the pond falling below 5,000m<sup>3</sup> storage during the 2023 period. This lack of wet weather storage and the failure to provide forecasted calculations means that the WWTP is **non-compliant** with condition 11 of the consent.

It is noted the levels have been mostly compliant since November 2023 which is a good indicator that the issue has been fixed.

### **Effluent Quality**

All effluent quality monitoring required by **Conditions 15** and **16** has been completed and are **compliant**.

**Condition 17** states that treated effluent must meet a variety of standards, including:

**Condition 17(d)** - The concentration of Ammoniacal Nitrogen (NH<sub>4</sub>-N) must not exceed 23 g/m<sup>3</sup> for more than 8 out of 12 consecutive samples (Limit 1), or 30 g/m<sup>3</sup> in more than 2 out of 12 consecutive samples (Limit 2).

According to the 2023-2024 Annual Report Limit 2 (30g/m<sup>3</sup>) for NH<sub>4</sub>-N was exceeded on 20 September 2023, 21 October 2023 and 14 June 2024. While the WWTP met all other standards outlined in **Condition 17** These exceedances of NH<sub>4</sub>-N means that it is **non-compliant** with **Condition 17** of the consent.

The Annual Report goes on to state that:

*“NH<sub>4</sub>-N levels in the oxidation ponds are typically elevated in the winter months when pond temperatures are lower. This is because colder climates slow biological activity in the aerated lagoon and oxidation ponds (BOD<sub>5</sub>), which increases ammonia. NH<sub>4</sub>-N levels start to increase around May/June and decrease again around December/January.”*

The report also goes on to explain that the WWTP undertook several works, such as de-sludging the aeration lagoon and replacing the inlet screen, which may have contributed to increased NH<sub>4</sub>-N levels over the 2023-2024 period.

It is noted that the WWTP is planning to undergo various upgrades over the next year that are anticipated to improve aeration of the lagoon and thus help keep Ammoniacal Nitrogen (NH<sub>4</sub>-N) within consented levels. These works include:

- Installation of a concrete lining within the aeration lagoon (Spring 2024), then
- Upgrading of the aerators (early 2025)

### **Groundwater Quality**

**Condition 18** requires that the consent holder, on a monthly basis, to monitor ground water levels and quality at bores 1-7 and water quality in the spring (at NZTM E1779714, N5486078) for:

- BOD5 (g/m<sup>3</sup>)
- Chloride (g/m<sup>3</sup>)
- E. coli (MPN/100ml)
- Ammonia Nitrogen (g/m<sup>3</sup>)
- Nitrate Nitrogen (g/m<sup>3</sup>)
- Nitrite Nitrogen (g/m<sup>3</sup>)
- Dissolved reactive phosphorus (g/m<sup>3</sup>)
- Total phosphorus (g/m<sup>3</sup>)
- Temperature (°C)
- pH
- Conductivity (µs/cm at 25oC)

The data has been collected for the seven bores plus the spring for each of the above parameters. All monitoring was undertaken as required thus the WWTP is **compliant** with **Condition 18** of the consent.

**Condition 19** states that the water quality samples from bores 4 and 5 should not exceed 100 MPN/100ml of *E. coli* or 11.3 g/m<sup>3</sup> for Soluble Inorganic Nitrogen. The 2023-2024 Annual Report shows that levels were not exceeded at either location during this monitoring period, so KCDC is **compliant** with this condition of the consent.

**Condition 21** requires the consent holder to monitor water quality data from bores 4, 5 and the surface spring for contaminant trigger levels of:

- Total Nitrogen (11.3 g/m<sup>3</sup> )
- Dissolved Reactive Phosphorus (0.1 g/m<sup>3</sup> )
- E. coli (100 MPN/100ml)

The 2023-2024 Annual Report shows that levels of *E. Coli* were exceeded at the surface spring location on 25 October 2023, 24 January 2024 and 11 March 2024. Because the trigger dates were not consecutive KCDC was not required to undertake any further action.

Dissolved Reactive Phosphorus (DRP), levels exceed the trigger limit (0.1 g/m<sup>3</sup>) at both bore 4 and 5 for each of the 12 monitoring dates, just as it had done for the past several years.

**Condition 21** requires the consent holder to submit a report to the Greater Wellington Regional Council (GWRC) within 40 working days should the results from water quality monitoring exceed the contaminant trigger levels on three consecutive monitoring rounds.

GWRC received a report written by Stantec New Zealand Limited assessing the DRP exceedances on 17 November 2023. The report claims that the exceedances of DRP is due to the LDTA being saturated with DRP and thus the ability for the site to uptake DRP is reduced. The consent holder is continuing to work with Stantec and GWRC to further investigate the exceedances of DRP and implement solutions for the issue.

All though *E. Coli* trigger levels were reached several times during the monitoring period and Dissolved Reactive Phosphorus continue to be a problem, the annual report shows that the monitoring and reporting required by **Condition 21** has been completed thus the WWTP is **compliant** with this condition.

### **Performance and Maintenance of the Distribution System**

**Condition 24** relates to the maintenance and performance of the effluent distribution system. During the investigation into the exceedances of DRP it was identified that the LDTA was not operating at full efficiency. **Condition 24** states that the consent holder needs to ensure that:

*“effluent is applied to no less than 75% of the nominated discharge area, with variability between areas over a rolling 12-month period not exceeding 25%”.*

The 2023-2024 Annual Report states that the current system is discharging to only approximately 30% coverage of the nominated discharge area. This is **non-compliant** with **condition 24** of the consent.

It is noted that the consent holder is currently working with GWRC to see if the upgrading of the distribution system for the LDTA is a permitted activity or whether a consent will be needed. The annual report states that the planned upgrade will bring the coverage up to nearly 100%.

### **Community Liaison Group, Complaints, and Incidents**

**Condition 40** requires KCDC to set up a community liaison group (CLG) and hold a meeting annually. KCDC will host a CLG on 20 November 2024. This is **compliant** with **condition 40**.

### **Incident Notifications**

**Condition 42** states that the consent holder needs to notify GWRC of any NH<sub>4</sub>-H exceedances within 24 hours of the incident or provide an incident report within 7 days. During the 2023-2024 monitoring period there was an exceedance of NH<sub>4</sub>-H which the consent holder failed to report to GWRC. Thus, the consent holder is **non-compliant** with **condition 42** of the consent.

### **Action required:**

#### **Dissolved Reactive Phosphorus, NH<sub>4</sub>-H and Upgrading of the Distribution System**

In the 2023-2024 Annual Report the consent holder has identified the following actions as works that will reduce the levels of DRP and NH<sub>4</sub>-H emitted by the WWTP:

- Bulk earthworks to replenish the contaminated soil and increase thickness of the LDTA,
- Upgrading the laterals with sprinklers to achieve maximum spread to near 100% of treatment area,
- Planting the LDTA and perimeter bunds
- Concrete sealing of the aeration lagoon to prevent soakage to ground, and
- Upgrading of the aerators

It is noted that KCDC applied to GWRC for a resource consent for bulk earthworks of the LDTA on 22 February 2024 which is currently being worked through.

The annual report states that the installation of the concrete lining in the aeration lagoon will commence in the spring of 2024 and that the upgrading of the aerators will happen in January 2025.

- Please provide an action plan outlining these works to GWRC by **11 December 2024**.

### **Conclusion**

Dissolved Reactive Phosphorus levels were exceeded in each of the 12 monitoring rounds during this compliance period but unfortunately exceedances of DRP have been a regular occurrence since 2016. The exceedance of NH<sub>4</sub>-H is unusual, but the council is moving forward to implement solutions that should fix both of these issues. The consent holder needs to make sure to work together with GWRC to ensure that progress on implementing these solutions continues to be made.

There were technical non-compliances to do with **Condition 11** and **Condition 42**, these are considered low risk, but it is expected that the issues leading to these non-compliances will be fixed so that reporting happens on time.

Please note that the Greater Wellington Regional Council (GWRC) has a responsibility to enforce the Resource Management Act 1991 (RMA). Accordingly, you should take all necessary steps to ensure you comply with your obligations under the RMA, including all conditions of your consent.

Your consent incurs variable compliance monitoring charges at your consent anniversary. These charges are likely to increase to reflect any additional time spent monitoring your consent to due to non-compliance.

If you have any questions about compliance monitoring of your consent, or this compliance assessment report, please contact me on 021-377-124 to discuss.

Sincerely,



**Kagan Morcom**  
Compliance Monitoring & Enforcement Officer  
Environmental Regulation

## GWRC compliance rating system

	<p><b>FULL COMPLIANCE – All conditions met – well done! No further action required</b></p> <ul style="list-style-type: none"> <li>All conditions assessed are met including supplying information and/or records</li> </ul>
	<p><b>MINOR NON-COMPLIANCE – Most conditions met. Some action may be required</b></p> <ul style="list-style-type: none"> <li>Minor breach of effects based conditions or works outside scope of consent with low risk of adverse environmental effects</li> <li>Breach of conditions which is technical in nature (eg, failure to submit monitoring report or records)</li> </ul>
	<p><b>MODERATE NON-COMPLIANCE – Some condition(s) not met. Action required</b></p> <ul style="list-style-type: none"> <li>Repeated failure to supply monitoring report or records.</li> <li>Breach of conditions where there are some environmental consequences and/or moderate risk of adverse environmental effects</li> </ul>
	<p><b>SIGNIFICANT NON-COMPLIANCE – Many condition(s) not met. Immediate action required</b></p> <ul style="list-style-type: none"> <li>Breach of conditions where there are significant environmental consequences and/or high risk of adverse environmental effects</li> </ul>

<p><b>VERY GOOD</b></p> <p>★★★★★</p>	<p>Overall excellent management of site and consents. The consent holder is proactive in meeting their consent requirements. If issues have arisen concerning consent conditions, the consent holder responds with promptness and effectiveness.</p>
<p><b>GOOD</b></p> <p>★★★★☆</p>	<p>Overall good management of site and consents. The consent holder is generally on top of meeting their consent requirements. Whilst there are some minor breaches of consent conditions, these have no ongoing environmental effects.</p>
<p><b>FAIR</b></p> <p>★★★☆☆</p>	<p>Overall the management of site and consents is considered to be fair. There are occasional breaches of consent conditions and/or lapses in providing information to GWRC.</p>
<p><b>POOR</b></p> <p>★★☆☆☆</p>	<p>Overall the management of site and consents is considered to be poor. There are consistent and ongoing breaches of consent conditions. The consent holder is not getting on top of their consent requirements.</p>

## Consent monitoring charges

<p>Each consent receives a consent monitoring charge from GWRC.</p> <p>This charge is made up of three parts:</p> <ul style="list-style-type: none"> <li>A <i>customer service charge</i> that covers the administrative cost of your consent(s);</li> <li>A <i>compliance monitoring charge</i> that covers all actual and reasonable time associated with assessing compliance with your consent(s) including the time spent visiting and assessing your site, information and reports you submit, file notes, travel time and reporting to you on compliance with your consent(s); and</li> <li>A <i>State of the Environment (SoE) charge</i> that covers a proportion of the cost of GWRC monitoring the environment that relates to your activity.</li> </ul> <p>For further information on consent monitoring charges, please see our <i>Resource Management Charging Policy</i>.</p>
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