

## Compliance monitoring assessment


Consent No:	WGN070230 [35862] WGN070230 [34284] [26014]	Date: 26 November 2025	Monitoring officer: Qurat Mahmood
Activity:	To discharge dewatered human effluent ('sludge') contaminants to land at the Carey's Gully Southern Landfill. It includes dewatered sludge produced in both Carey's Gully Sludge Dewatering Plant (SDP) and Western WWTP. The discharge of contaminants to air, namely odour, from the biofilter, centrate treatment plant and other structures and operations at Carey's Gully Landfill Sludge Treatment Facility.		

### Your compliance rating

This compliance report covers the period from 1 July 2024 through to 30 June 2025. Your compliance rating is below.

WGN070230 [35862]		<b>FULL COMPLIANCE</b> All conditions met
WGN070230 [34284] [26014]		<b>MODERATE NON-COMPLIANCE</b> Some condition(s) not met. Action required

*Overall compliance summary for Careys Gully Sludge Dewatering Plant:*

<b>FAIR</b> 	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.
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GWRC acknowledges that the Carey's Gully facility will soon be replaced by the new SMF facility. However, as the Carey's Gully SDP is still operating under its current consent, it must continue to comply with all consent conditions. The biofilter degradation caused by excessive H<sub>2</sub>S loading, along with the facility not being maintained under negative pressure, constitutes technical non-compliances and cannot be acceptable. It is recommended that appropriate mitigation measures be implemented to restore the biofilter to optimal performance.

**WGN070230 [35862] To discharge dewatered human effluent ('sludge') contaminants to land at the Carey's Gully Southern Landfill.**

**Condition 4** requires that the sludge disposed to the landfill is no less than 20% dry solids content by volume basis, based on a weekly average measurement of a minimum of 5 grab samples per week from different skip bins before their disposal at the landfill.

The annual report provided the weekly average % dry solids of dewatered sludge disposed to Southern Landfill as no less than 20% for the reporting period. This is compliant.

**Condition 5** requires that no more than 200 wet tonnes per day (recorded at the weigh bridge) of sludge contaminants shall be discharged to the Southern Landfill.

The statistics provided for the assessment of daily tonnage of dewatered sludge disposed to the Southern Landfill show the condition is compliant for the reporting period.

The total dewatered sludge disposed to the Southern Landfill from 1 July 2024 to 30 June 2025 is 15,262 tonnes. Carey's Gully SDP produced 14,376 tonnes of dewatered sludge, while Western WWTP produced 886 tonnes of dewatered sludge.

**Condition 11** requires the consent holder to provide any alternative options for the disposal of bio-solids in the Wellington District.

Wellington City Council is delivering a Sludge Minimisation Project to replace the Carey's Gully SDP facility. This facility will reduce the volume of sludge produced by up to 80% by creating a stable, dry, odourless product that can be more easily transported, and used in productive ways such as a soil conditioner and fuel for industrial heat.

More information about the project can be found on their website: [Moa Point sludge minimisation facility - Projects - Wellington City Council](#), including the expected commissioning date for this project.

**Condition 12** requires sludge contaminants discharged to landfill be combined with municipal solid waste and/or bulking material at a ratio of at least four parts municipal solid waste/bulking material to one part sludge contaminants by mass on a daily basis.

The statistics presented in the annual report showed the weekly actual ratio of the general waste to dewatered sludge is compliant for the reporting period.

The total solid waste deposited to the Southern Landfill from 1 July 2024 to 30 June 2025 was 94,992 tonnes and mixed with 18,077 tonnes of total sludge and screenings from Careys Gully SDP. The average ratio of sludge to waste for the reporting period is 1 tonne: 5.25 tonnes.

**Condition 15** requires the permit holder to record daily and weekly averages for the total tons per day of sludge contaminated disposed of to landfill, the source of the dewatered sludge contaminants, dry solids content of the sludge in the skip bins determined by the grab samples, volume of solid municipal waste and additional bulking material deposited and mixed with the sludge at the landfill.

This information is provided in the annual report. Please continue to comply with all consent conditions.

**WGN070230 [34284] To discharge contaminants to air, namely odour, from the biofilter, centrate treatment plant and other structures and operations at Carey's Gully Landfill Sludge Treatment Facility**

**Condition 4** states that there shall be no discharges to air that are, in the opinion of an enforcement officer of the Wellington Regional Council, noxious, dangerous, offensive or objectionable at or beyond the outer perimeter of the legal boundaries defined by the Wellington City District Plan (Designation No. 61, Planning Map 2).

The consent holder has investigated all odour complaints received and reported to GWRC on their investigation findings. There has not been any noticeable increase in odour complaints reported to Greater Wellington during the reporting period.

**Comment:** Please continue to send notifications when any planned or unplanned maintenance activity is performed at the plant that has the potential to increase odour levels at the facility.

**Condition 11** requires the permit holder to conduct a 'building tightness' audit a minimum of once every two years.

A building tightness audit was performed in October 2024. Condition 11 requires the consent holder to provide the report to the Manager, Environmental Regulation, Wellington Regional Council within one month of the completion of the audit. However, this report was not submitted in the required timeframe.

***Building tightness***

The assessment indicated that during the scheduled building tightness assessment on 22 October 2024, the Source Testing New Zealand Limited (STNZ) air quality scientist observed a strong and offensive odour upon arrival. This likely due to the doors to the polymer mixing and centrifuge rooms being left open while the centrifuges were operating. Given the known high H<sub>2</sub>S emissions from the centrifuges, the scientist deemed the exposure risk extreme and did not enter either room, preventing assessment. It is understood that all exterior and centrifuge room doors should remain closed during operation; however, operators may open doors to alleviate excessive odour buildup within the plant.

The assessment noted that STNZ has previously raised serious concerns over the levels of H<sub>2</sub>S within the plant several times and as the concentration at the inlet to the biofilter was approximately 50 ppm, the levels within the plant were likely to exceed 100 ppm. STNZ considered the risk of exposure to potentially lethal levels of H<sub>2</sub>S within the plant to be significant and it was too hazardous to enter the polymer mixing or centrifuge room, preventing any assessment.

GWRC requested WWL to provide Building tightness assessment on 4 April 2025, following a complaint from a Veolia employee that SDP is operating under dangerous conditions due to extremely high levels of H<sub>2</sub>S and also requested WWL to investigate the issue. WWL took matter seriously and escalated it to their health and safety department (H&S) and conducted their investigations.

The building tightness report confirmed that the plant has been producing high levels of H<sub>2</sub>S during centrifugation and is overloading the biofilter media and building is not under negative pressure.

In their response on 6 May 2025, H&S reported that Veolia has addressed the H<sub>2</sub>S issues following a risk assessment to ensure short-term site safety. The Centrifuge Room has been designated as a restricted entry area, and the facility is now operating under Veolia's H<sub>2</sub>S Prone Working Zone Procedure. In addition, Veolia has undertaken repair works, including sealing holes in the conveyor ducts and repairing corroded motor covers to prevent H<sub>2</sub>S gas from escaping. They have also implemented measures to limit sludge storage onsite, thereby reducing H<sub>2</sub>S production.

In later response on 3 November 2025, WWL noted a range of repairs to odour ducting and ventilation systems, including the biofilter fans to improve effectiveness of the odour control system. There are plans to improve the door management system over the next month and the replacement of the biofilter media is also in planning. This is to be undertaken as soon as biofilter materials is procured. WWL H&S department also confirmed that Veolia has carried out H<sub>2</sub>S monitoring at the site. Results showed that operator exposure levels are categorised as Low Risk (less than 1% of the 8-hour TWA WES), indicating that current controls are effective in protecting workers.

Condition 6 requires "The emission control equipment shall draw adequate negative pressure to ensure the effective capture and treatment of air discharged from the SDP building, centrate wet-well, and all other areas from which air is extracted to ensure that fugitive emissions are minimised".

The STNZ report has shown that building pressures were lower than the previous assessment and indicated the centrifuge room was under positive pressure while the polymer mixing room and skip bays were under a slight negative pressure but still substantially lower than measured in 2023. As a result, there is the potential for fugitive odour emissions.

**Comment:** The assessment indicated that when the exterior doors were open, the odour control system was unable to maintain negative pressure within the building, resulting in odour emissions from the plant. This is therefore regarded as a technical non-compliance with Condition 6 of the consent. I also acknowledge that repair works have been undertaken to reduce H<sub>2</sub>S gas emissions and that measures have been implemented to prevent hazardous working conditions.

STNZ assessment also noted that the centrate sump was found to have several displaced seals, open instrument ports and the seals for the power cable access were also damaged.

**Recommended Action:** it is recommended that the seals of the centrate sump be repaired as advised by STNZ in their report.

### ***Biofilter flow conditions***

The results of the biofilter flow monitoring showed the total volume of foul air extracted from the plant to be 19,464 m<sup>3</sup> /hr (actual conditions), approximately 18% lower than observed in October 2023. The flows to Cells 1 and 3 had decreased by approximately 92% and 79% respectively, while the flow to Cell 2 had doubled indicating the flow distribution is no longer uniform. Furthermore, the report indicated that Cell 2 was treating nearly 60% of the total flow, resulting in a significant reduction in the cells odour treatment capacity.

**Recommended action:** It is recommended that the flow distribution be re-balanced to ensure consistent uniform flows to each of the biofilter cells.

The building tightness assessment noted that, whilst the physical components of the system were still fit for purpose, it was having difficulty keeping the building environment under negative pressure due to several reasons including the reduced performance of the biofilter due to high levels of H<sub>2</sub>S loading.

WWL has reported in the annual report that recommendations provided by STNZ in the building tightness report were actioned within the financial period.

**Condition 12** requires an annual biofilter monitoring report to evaluate the distribution and composition of the media.

A biofilter assessment was performed in July 2024. A copy of the report has been provided in Appendix II: SDP Biofilter Media Assessment. The assessment found reduced biofilter performance in various areas because the media is degrading rapidly, driven by a significant increase in H<sub>2</sub>S concentrations entering the system.

WWL noted in the annual report that several of the actions recommended in the biofilter media assessment had been carried out to help improve performance.

**Condition 13** requires the permit holder to measure and record continuous online display of differential pressure in the final air duct ahead of the biofilter, weekly recording of pressure across the biofilter bed, weekly general visual observations of the biofilter condition, including weed growth, compaction, and short-circuiting, monitoring media moisture content in the upper two-thirds layer once a month for the months of November to March, and once every 3 months during the months of April to October and distribution of continuously measured inlet air temperature to the bio-filter system.

This information is provided in the annual report.

**Condition 14** requires the permit holder to comply with biofilter requirements.

The Annual report presented that the average moisture content readings are within the consent requirement of 40 - 65%. This is compliant.

The average pH content readings are within the consent requirement of 5 - 8.

The report concludes the SDP biofilter media is in rapidly degrading condition and is not fully complying with the permit requirements.

**Condition 15** requires submitting the relevant monitoring results, data and other information as required by conditions 11 - 14 of this permit.

This is provided in the annual report. Therefore, this is compliant.

**Condition 17** requires the permit holder to engage with the Community Liaison Group (CLG) established and maintained under Consent WGN940045 [20316] and [20346] (general Southern Landfill consents). The role of the CLG will be to liaise with the community about activities relating to the Carey's Gully Sludge Dewatering Plant and associated disposal to the Landfill and provide information to the community.

The CLG meetings are organised and facilitated by the operators of the landfill. The last meeting held in the reporting period was on 15th May 2025. The meeting minutes were provide by WCC.

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 due to non-compliance.

## 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>LOW RISK 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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