

## Wellington Water/Veolia Regional Wastewater Treatment Plant Services Review Cover Note

Wellington Water and Veolia accept the findings of this review with the following caveats and points of emphasis:

1. The purpose of this review was to look at the Regional Wastewater Treatment Plants contract and its influences on compliance only. As a result, the reviewers did not look at the funding model between Wellington Water and its owner councils and funding is a major component of reliable compliance.
2. The principal driver of non-compliance in the Regional Wastewater Treatment Plants is the poor condition of the existing and ageing assets.
3. The deteriorating condition of the assets is compounded by a lack of spare parts and both equipment redundancy and capacity redundancy at the treatment plants. This means there is no backup capacity to allow for required upgrades, maintenance, and renewals to be undertaken while not impacting the required operational compliance of the plants.
4. To address ageing assets, significant investment is required to upgrade the plants. Current funding levels in some areas are insufficient to enable improvements, further increasing the risk of deteriorating performance from some of the treatment plants.
5. Until work is completed to renew and upgrade assets mana whenua, councils and communities should expect unreliable compliance.
6. The review was not able to take a deep dive into some of the areas identified for improvement, many of which were underway prior to the review. In particular, asset management processes and renewal planning for delivery is well advanced within the constrained funding environment. Detailed planning of the complex elements required to bring plants back to compliance is also well underway.

Wellington Water contracts Veolia to operate the Regional Wastewater Treatment Plants in the metropolitan Wellington region. Over the past few years, the region has seen ongoing compliance issues across the treatment plants. In 2021, Wellington Water reviewed its contract and relationship with Veolia and both parties have been on a joint journey to improve the management and operations of the plants.

Earlier this year, prompted by recent compliance incidents and coinciding with the request from the Wellington Water Committee in its letter of expectations, for Wellington Water to review its key suppliers, Wellington Water and Veolia decided to undertake a joint review on how we were tracking and to test if we're continuing in the right direction to getting the plants back to full compliance.

This report outlines the findings of that review and recommendations on areas Wellington Water and Veolia can optimise performance. Wellington Water and Veolia are working towards implementing the recommendation.

Significant investment is required to upgrade the plants. Not having the needed level of investment in the past means we have a growing backlog of work to get the plants up to reliable performance. Continued deficits in funding means ongoing delays in getting this work done.

Although, even with sufficient funding, delivery of upgrades will take some years. Until this work is completed reliable compliance is unlikely to be achieved. The renewals work required to bring the plants up to a reliable level of compliance needs to be staged as the plants must remain operating while the work is undertaken.

While long-term investment from councils to renew ageing assets at the metropolitan wastewater treatment plants is needed to ensure we can reliably maintain compliance, we must also ensure that we are operating these assets to the best of our ability.

The contract between Wellington Water and Veolia is prescriptive in its avenues for performance management and work is underway by Wellington Water to develop a pathway to proactively manage the performance of the contract outcomes, while maintaining the close collaborative relationship that is required for successful long-term outcomes.

Veolia have engaged a global taskforce to enhance access to international expertise, invested in further staff training, updated their communication structures to meet the needs of stakeholders and regulatory compliance, and ensured clear organisational focus on critical areas including preventative maintenance.



**Charles Barker**  
Acting Chief Executive  
Wellington Water



**Emma Brand**  
Country Director New-Zealand  
Veolia

# WELLINGTON WATER REGIONAL WASTEWATER TREATMENT PLANTS TREATMENT SERVICES CONTRACT REVIEW



August 2024

Review Report

**REVIEW REPORT**

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# EXECUTIVE SUMMARY

This review has been undertaken jointly by Wellington Water and Veolia as a follow-up of a formal review that was undertaken in late 2021. The purpose of the review was to clarify the causes of poor performance at the region's metropolitan Wastewater Treatment Plants (WWTPs) and to identify opportunities for further improvements that would bring the WWTPs back to full compliance.

The Reviewers acknowledge the genuine desire demonstrated by the senior management teams of both Veolia and Wellington Water to achieve full compliance at the WWTPs. This Review has confirmed that progress had been made in implementing the comprehensive list of recommendations made in the 2021 Review. The relationship challenges that precipitated the 2021 Review has been addressed. The Reviewers note that asset condition and performance were not identified as major cause for concern in the 2021 Review. However, the emerging knowledge of the poor condition of the existing and aging assets is now the principal driver of non-compliance at the WWTPs. Therefore, further improvements are required.

Both Veolia and Wellington Water recognize that full compliance with resource consent conditions at the wastewater treatment plants (WWTPs) is not being achieved. The fundamental issues stem from aging infrastructure, inadequate redundancy in the system, inadequate process controls, and staffing challenges. Veolia's efforts are hindered by a lack of root-cause analysis capability and a focus on managing non-compliance incidents rather than optimizing processes to avoid future events. To achieve full compliance at the WWTPs requires strong collaborative effort by Wellington Water and Veolia. The form of contract does not promote a collaborative approach. This requires Wellington Water to implement an effective contract management framework that introduces the necessary collaboration to accompany the contract.

There is evidence of lack of trust between the two organisations, with Veolia not having full confidence of Wellington Water. Despite professional respect and courtesy among staff, the efforts to align and meet compliance standards have shown to be insufficient. Both organisations need to work seamlessly on developing and implementing comprehensive Asset Management Plans, improving maintenance routines, renewing assets, and ensuring staff are adequately trained and knowledgeable about regulatory requirements.

To move forward, Veolia must leverage its global expertise to address local challenges and enhance its operational practices. Wellington Water needs to improve its contract management practices to foster a more collaborative relationship. Building trust and developing a clear Charter for collaboration are essential for ensuring the WWTPs operate reliably and compliantly, ultimately benefiting the community.

The most common reasons identified for the wastewater treatment plants failing to meet consented effluent quality standards, the improvements and responsible organisation are outlined below:

<b>Reason for Non-Compliance</b>	<b>Improvements</b>	<b>Principal Responsible Entity</b>
Aging Infrastructure – The WWTPs are old and have outdated equipment and infrastructure that are prone to failure	Regular infrastructure assessments, timely asset renewal and replacement planning, and investment in modern technology	Wellington Water (ensuring funding from shareholding councils)
Mechanical Failures - Equipment such as pumps, blowers, and aerators break down, leading to process failures	Regular planned and preventative maintenance, timely repairs, and appropriate redundancy and spares to prevent these issues	Veolia to lead, Wellington Water to collaborate on renewals and provide funding
Inadequate Process Control – Inability to monitor and control treatment processes result in inefficiencies and could lead to process failures	Implement advanced monitoring systems and ensure staff are properly trained in process control techniques	Veolia
Lack of Asset Management Planning – Inability to identify condition, failure modes, and renewals of critical assets	Co-ordinate the development of a strategic asset management plan for each WWTP with clear responsibilities assigned	Wellington Water to lead, Veolia to provide significant input on asset criticality, condition, failure modes
Staffing Issues - Inadequate training and understaffing lead to operational errors and delayed responses to issues	Ensure sufficient staffing levels, provide continuous training, and foster a culture of proactive problem-solving – competent, skilled and motivated	Veolia
Poor Sludge Management - Inefficient handling and disposal of sludge cause system backups, operational issues and non-compliance	Implement effective sludge management practices, including regular sludge removal and proper disposal techniques	Veolia
Overloading - Influent flows or contaminant loads that exceed the plant's design capacity overwhelm the system	Proper planning for future capacity needs, real-time monitoring of influent characteristics, and implement flow equalization/storage tanks	Wellington Water
Regulatory Requirements and Changes - Staff are not conversant with regulatory requirements and fail to appreciate consequences of their actions	Educate and inform staff about regulatory changes and proactively upgrade procedures and practices to comply with standards	Veolia

# INTRODUCTION

## This Review

This review has been jointly commissioned by Wellington Water and Veolia. It follows from an independent review of the Regional Wastewater Treatment Plant (RWWTP) Services Contract that was conducted in 2021. Much of the earlier review recommendations have been implemented. This has resulted in a significant improvement in the contractual relationship between the two organisations. Despite this, compliance issues have continued at the RWWTP's.

A further review was deemed appropriate by Wellington Water and Veolia to clarify the causes of poor plant performance and to identify opportunities for further improvements that would bring the RWWTPs back to compliance. The terms of reference for this review is at Appendix 1.

## Background

There are four Wastewater Treatment Plants (WWTPs) in the metropolitan Wellington region:

- **Moa Point** and **Western** service Wellington City. Both were previously operated by Veolia NZ under a 25-year design build and operate (DBO) contract which included the sludge dewatering plant at the Southern Landfill. This contract expired in February 2020.
- **Seaview** services Hutt and Upper Hutt cities. Hutt Valley Water Services (Suez/Beca) operated this plant under a 20-year DBO contract that expired in June 2020.
- **Porirua** services Porirua City and some northern suburbs of Wellington City. Wellington Water previously operated this plant.

Following a decision in 2017 to contract out the operations and maintenance of the four WWTPs, Veolia were selected as the preferred supplier of these services under a performance-based contract. Management of the WWTPs was progressively transferred to Veolia under the new Regional WWTP contract as existing contracts expired. The expectation by Wellington Water was that their role would be restricted to one of very limited contract management.

## The 2021 Review of Regional WWTP Contract

The review undertaken in December 2021<sup>1</sup> was triggered due to numerous performance issues across the four WWTPs. Since the implementation of the regional WWTP contract with Veolia, there had been unacceptable environmental impacts resulting from the failures. As a result of these failures at the WWTPs, Greater Wellington Regional Council had issued a series of abatement, infringement and breach notices.

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<sup>1</sup> Independent Review of the Wellington Water Regional wastewater Treatment Plant (WWTP) Operating Model, December 2021

Performance issues primarily concerned the following areas:

- non-compliance with consent conditions,
- effluent non-compliance,
- sludge discharges,
- sampling or analysis errors,
- lack of monitoring activities, and
- late or poor reporting.

Wellington Water directed its focus on working collaboratively with Veolia in identifying the underlying issues and measures required to improve plant performance. It commenced a moratorium on further fines and breach notices to enable collaborative approach.

The review made a series of recommendations (refer Appendix 3).

## **Beyond Compliance**

In an initiative-taking response to the commissioning of the 2021 Review, Veolia established a 'Beyond Compliance' Task Force. Its purpose was to consider Veolia's operations of the WWTPS and to jointly with Wellington Water align their services with community expectations.

Further information on the 'Beyond Compliance' initiative is provided in Appendix 4.



# REVIEW STRUCTURE AND PROCESS

## Review Objectives

The objectives of this review are -

- o *To confirm the main causal effects of non-compliance.*
- o *To gain further insight into the on-going non-compliance of the WWTP's.*
- o *To identify further improvements to the operating model.*
- o *To identify any impediments to achieving long term, ongoing consent compliance.*
- o *Review suitability of resourcing levels in terms of delivery of effective operational management, asset management and planning, to deliver long term ongoing compliance.*
- o *Review contract management processes to ensure effective and efficient operations and delivery of value to Client Councils.*
- o *Understand the implications of the capital funding process and constraints (if any) on compliance.*
- o *Gain insight into optimising Veolia/WWL communication of incidents to stakeholders.*

## Review Deliverables

The key deliverable for the review was to deliver a 2024 RWWTP Service Contract Review Report to the respective Senior Leadership Teams that includes:

- o *An objective analysis of the current situation, performance of all parties and contract.*
- o *Recommended model changes and delivery improvements endorsed by the Review Steering Group.*
- o *Recommendations designed to bring plants back to compliance.*

## The Review Team

To ensure an objective analysis of the situation, two independent expert advisors were commissioned to undertake the review:

### **Roly Frost**

Roly has a degree in civil engineering and 50 years' experience in the infrastructure sector. He is a former president of Engineering NZ, Chair of the Engineering NZ Foundation and member of the Chartered Professional Engineers Council.

He holds several project management board roles and specialises in independent roles in procurement models and contract administration. He is an independent professional advisor to Waka Kotahi, Auckland Transport, Defence and Kiwi Rail. Roly has presented at international conferences on risk management, asset management and contracting models.

## **Raveen Jaduram**

Raveen has a Masters in Civil Engineering and close to 40 years' experience working in the water industry in New Zealand, Australia and Fiji. He is former President of Water New Zealand.

He currently holds membership on a number of boards. Raveen has deep institutional and systems knowledge of the water infrastructure sector. His previous roles include Chief Executive of Watercare Services Limited, Managing Director of Murrumbidgee Irrigation Limited, President and Chair of Water New Zealand and Chair of the NZ Water Sector Senior Executives Forum.

The reviewers have been supported in an administrative and organisational capacity – including where necessary to ensure independence and confidentiality of interviews, by Euan Stitt, Wellington Water's Chief Advisor - Service Delivery.

## **Review Process**

This review has been undertaken by conducting numerous interviews with relevant management and operational staff at Wellington Water and Veolia. These interviews were undertaken in an environment that encouraged openness, honesty and confidentiality. The purpose was to identify issues that were contributing to the less than effective performance of the four WWTPs, especially from meeting compliance conditions. Some members were interviewed more than once to validate initial findings. The feedback and insights from these interviews have been instrumental in informing the reviewers of the current situation and the possible contributing factors. The recommendations have been made on the basis of these findings.

A list of those interviewed as part of the review is provided at Appendix 2 to this report.

The reviewers did not visit any of the wastewater treatment plants, nor conduct any physical inspections of the existing assets.

Appropriate documents and outputs from previous reviews, including the 2021 Review were also utilised.

# REVIEW FINDINGS

## Current Situation

From the interviews conducted, there was general agreement between the operational management of both organisations of the following:

- Full compliance with resource consent conditions is not being achieved.
- Veolia does not enjoy full confidence of and maintain the requisite trusted relationship with Wellington Water
- Wellington Water contract management team structure, skillset and competencies need to be enhanced to manage the contract
- Wellington Water has not implemented an effective performance management framework to ensure Veolia were meeting all the requirements of the contract
- A Charter of how the two organisations will work together to achieve the strategic purpose of the relationship for the benefit of the community has not been developed
- Staff from both organisations enjoy respect and professional courtesy

The interviewers also noted that

- Veolia process function was focussed mostly on compliance-related work rather than process optimisation
- Veolia staff considered to lack capability to undertake root-cause analysis and ensure repeats of similar problems do not occur
- Veolia management and operations staff consider they are doing their best although there are challenges mostly resulting from failures, non-compliance and the subsequent explanations
- Wellington Water staff consider 'Beyond Compliance' had not made much of a difference – issues continue
- Veolia can participate more in the asset management planning process led by Wellington Water by providing effective critical asset condition and plans for preventative maintenance or renewal
- Veolia is yet to gain full confidence of Wellington Water to deliver larger capital renewal projects
- There are too many reactive maintenance/interventions required – need to move to more planned maintenance routines

## Causes of Non-compliance

From the evidence provided, and based on the interviews, the following factors continue to contribute towards the non-compliance of the RWWTPs:

### Aging Infrastructure

The wastewater treatment plants are old, and much of the equipment are obsolete and outdated. These are prone to failure. The Porirua WWTP considered to be in the best condition. The other three WWTPs were handed to Wellington Water in 2020 on the expiration of their Design-Build-Operate (DBO) contracts. Based on the evidence provided, these three WWTPs seem to require substantial replacement and renewal of assets.

### Mechanical Failures

Due to the aging infrastructure, equipment such as pumps, blowers, and aerators are failing, leading to incomplete treatment processes. As much of the equipment is obsolete, replacements are difficult to obtain, substitutes are required, there are long delivery times, and these factors contribute to the WWTPs being exposed to non-compliance.

### Asset Management Planning

Responsibility for early identification of the condition of critical assets, failure modes and renewal programmes is not clear between the parties. This has also led to confusion between the parties over the timing of funding. Wellington Water requires timely injections of capital investment funding from its shareholding councils for renewals and upgrades.

### Inadequate Process Control

There does not seem to be the necessary levels of monitoring and controls of treatment processes for operational staff to detect and intervene at an earlier stage and prevent the WWTPs going into non-compliance.

### Staffing Issues

Frontline operational staff require requisite training to operate WWTPs that are aging and prone to failures. They also need to have sufficient understaffing to avoid operational errors and not delay responses to emerging issues. These plants are more challenging to operate and require staff to demonstrate strong sense of urgency in responding to failures. Additional operational staff are required to operate and maintain aging infrastructure that is prone to failures relative to newer and more automated plants.

### Poor Sludge Management

There are numerous instances of non-compliance arising from inefficient handling and disposal of sludge in the treatment process. The non-compliance at Porirua WWTP is mostly related to poor sludge management.

### Overloading

There are instances where, due to infiltration and inflows, the flows and contaminant loads exceed the WWTPs' design capacity, resulting in discharges that may be non-compliant.

### Regulatory Requirements and Changes

Operational staff do not fully understand the conditions of resource consents and the implications of equipment failures or treatment process failures on compliance requirements.

## **Improvements**

There are no glaring gaps in the operating model that require significant amendments or change. What is required is for the two organisations to fulfil their respective roles professionally and diligently. The four WWTPs can be operated in a compliant manner most of the time if the causal factors were adequately addressed:

### Asset Management Planning and Aging Infrastructure

The shareholding councils have recognised the need to invest in renewals and have increased funding budgets. To ensure the investments are made in the most prioritised manner, the four WWTPs require effective asset management plans. These will be driven by their strategic objectives in the sewerage system, their capacity to meet current and future growth, the renewal and replacement of obsolete assets, the maintenance and operations plans, the required redundancy and spares, and the roles and responsibilities of Veolia and Wellington Water in implementing the plans. Both organisations need to be able to demonstrate that they have retained best-in-class professionals who are knowledgeable in the discipline of asset management of WWTPs. The shareholding councils need to ensure the funds are appropriately identified and provided to Wellington Water to achieve the investments and renewals identified in the Asset Management Plans.

### Mechanical Failures

Failures of mechanical and electrical components in the WWTPs should be minimised. Regular planned and preventative maintenance of active assets, timely repairs, and appropriate redundancy and spares of critical components will prevent such failures. This is a core function that Veolia needs to manage effectively.

### Inadequate Process Control

Ensure there are advanced monitoring and process control systems (SCADA, plant information) that provides the data and evidence required to optimise the operation of WWTPs and minimises non-compliance incidents. Staff must be trained in process control techniques so that they are able to utilise these tools effectively. These are tools that Veolia require for effective operational control of WWTPs and needs to work collaboratively with Wellington Water on specifying need, funding and financing of the upgrades.

### Staffing Issues

Operating and maintaining an aging WWTP with obsolete and failing equipment requires highly competent, experienced and motivated staff. This can be achieved by ensuring there are sufficient staffing levels at each WWTP, by providing continuous training, and fostering a culture of proactive problem-solving. This is a critical requirement that Veolia needs to meet. The process function should be freed from compliance issues and instead focussed on treatment process improvements. For process improvements to be effective requires support from leadership and from the operators.

### Poor Sludge Management

Failures, especially at Porirua WWTP, will be minimised by implementing effective sludge management practices that includes regular sludge removal and proper disposal techniques. The principal responsible for addressing this is Veolia, supported by Wellington Water for any obligation it has on managing the receipt of sludge at external locations.

### Overloading

Wellington Water, as the entity responsible for the management of the sewers that transport wastewater to the WWTPs, must plan for future capacity needs, real-time monitoring of influent characteristics, reducing infiltration and inflows, and implement flow equalization/storage tanks to reduce excessive peaking that would compromise the treatment process.

### Regulatory Requirements and Changes

Veolia must educate and inform its staff on the regulatory requirements at each WWTP and of any regulatory changes. Wellington Water, with support from Veolia, should proactively upgrade processes and technologies to comply with standards.

# CONCLUSIONS

## Review Findings

Wellington water and Veolia have both made improvements based on the recommendations of the 2021 Review. The relationships between the contract managers of the two organisations are congenial and professional. Operations staff from both organisations demonstrate respect for one another and seem committed to their purpose. Despite these favourable attributes, both organisations acknowledge that full compliance with resource consent conditions is not being achieved. Despite efforts directed individually, there seems to be an elusive alignment to achieve the much desired and consistent compliance at all WWTPs.

There are areas of further improvements required of Veolia. Veolia needs to ensure the capacity and capability of staff are commensurate with the need to operate and maintain aging infrastructure that is prone to mechanical failures. Veolia is responsible for operating and maintaining the WWTPs in accordance with the contract it entered into with Wellington Water.

Wellington Water must hold Veolia to the contractual terms. Wellington Water needs also to work collaboratively with Veolia. This is a challenging task as the contract has not been written to be executed in a collaborative manner.

Wellington Water's contract management team is committed to improving the relationship and achieving contractual outcomes. Similarly, Veolia management and staff have a desire to meeting Wellington Water's aspirations. However, those efforts seem not to be aligned sufficiently to demonstrate performance in the form of the WWTPs operating to compliance standards.

While there is evidence of professional respect and courtesy of staff from both organisations, there is a lack of confidence and trust. Trust and confidence is built on experience and for Wellington Water this is measured by Veolia's performance against their expectations.

## Causes of Non-Compliance

The causes of non-compliance at the WWTPs arise from the fact that they are old. The aging infrastructure of the WWTPs are prone to failure. Significant asset renewal is needed for three of the plants handed over in 2020 from the Design-Build-Own contracts. The failure of mechanical and electrical equipment like pumps, blowers, and aerators disrupt treatment processes, resulting in non-compliant discharges.

There is a lack of advanced monitoring and controls, preventing early detection and intervention to avoid non-compliance. Due to the aging equipment and frequent unplanned failures, more operational staff and training are required. The plants demand experienced and motivated staff with a sense of urgency.

Inefficient sludge handling also leads to non-compliance, particularly at the Porirua WWTP. This is made worse when WWTPs are overloaded with higher flows from infiltration and inflows. These high flows and contaminant loads exceed WWTP design capacity, leading to non-compliant discharges.

There is evidence that operational staff lack understanding of resource consent conditions and the compliance implications of equipment and process failures.

## Improvements Required

To manage an aging set of WWTPs where equipment is prone to failures requires a systematic approach to the management of the assets. Collectively, Veolia and Wellington Water need to further develop and implement Asset Management Plans that include strategic objectives, asset renewal, maintenance plans, and clear roles and responsibilities. Veolia needs a maintenance management plan that minimise mechanical failures through regular planned maintenance, timely repairs, and appropriate redundancy and spares.

Veolia needs to ensure there is sufficient staffing levels, continuous training, and a culture of proactive problem-solving to operate and manage the aging equipment at the WWTPs. Staff need to understand regulatory requirements and proactively upgrade processes and technologies to meet standards. Advanced monitoring and process control with appropriate KPIs, trained and knowledgeable staff, and focus on optimising WWTP operations will ensure WWTPs are more compliant.

Veolia needs to improve sludge management practices to minimize failures and non-compliance. Wellington Water needs to prepare plans for future capacity needs, consider changing influent characteristics, reduce infiltration and inflows, and implement flow equalization/storage to manage peak flows.

## Contractual and Collaborative Framework

Wellington Water has clear expectations that Veolia will bring the necessary resources, expertise, and innovations to ensure compliant operation and maintenance of the WWTPs. Veolia needs to maintain assets to prevent disrepair, while Wellington Water needs to ensure funds are available for the renewal of end-of-life assets. Both organisations need to work collaboratively to develop and implement effective asset management plans, clearly articulating roles and responsibilities and addressing maintenance and renewal risks.

The relationship will benefit from a Charter outlining how the two organisations will work together for the benefit of their communities accompanied by an appropriate self-monitoring framework .

## Restating from 2021 Review

The reviewers feel the following statements from the 2021 Review are still valid:

*As an organisation, Veolia has the capacity and capability to be a successful operations and maintenance service provider to Wellington Water. There are positive examples of Veolia being a long-term contractor to other clients in New Zealand. A successful contract relationship requires alignment and focus on its primary objectives, much of which must be reinforced by positive behaviours from Wellington Water.*

*The recent failures at the WWTP that resulted in breaches and non-compliances were avoidable. These were due to one or more of: human error; lack of resources; poor judgement; inadequate procedures; insufficient management oversight; or absence of planning.*

*While it is noted that Veolia are looking to move “Beyond Compliance”, they have nevertheless failed to deliver the fundamentals to achieve the environmental objectives that are set in the resource consent conditions and expectations by Wellington Water.*

*Wellington Water is the agency responsible for wastewater management for its Client Councils. Failures at the WWTPs reflect poorly on Wellington Water – its Board, management and staff. Wellington Water’s objective for its wastewater management responsibilities was to contract the operations and maintenance of the plants with an international provider highly proficient in the business, that would bring global innovation and expertise to the table and would work collaboratively to deliver the environmental outcomes the community sought.*

*In its tender proposal accepted by Wellington Water, Veolia promised to meet these objectives. In practice, over the short period of operations, Veolia has failed to demonstrate that it has brought international capabilities and competencies to Wellington. The increased levels of breaches and non-compliance at the treatment plants are evidence of this failure. Surprisingly, the issues were not isolated to Seaview and Porirua but evident at Moa Point and Western – the two WWTPs that Veolia has been previously operating, maintaining and upgrading as part of its Design-Build-Own (DBO) contract.*



# RECOMMENDATIONS

## Recommendation 1 – Veolia to Deliver

Veolia promotes itself as “... the benchmark company for ecological transformation.” It is a global water leader. In its management of the four regional WWTP, Veolia needs to utilise its global resources in relation to treatment process knowledge and expertise, innovation and environmental management.

Veolia has a contractual obligation to Wellington Water and, by association, to the communities of greater Wellington region, to ensure all WWTPs are compliant with their resource consent conditions and that the discharges do not have adverse impacts to the receiving environments.

It needs to better align its expertise with local needs, ultimately improving compliance and reducing the frequency of failures and breaches. It will be able to achieve this by:

- Tailoring its global expertise and solutions to fit the local context of aging WWTPs, constrained funds, high community expectations and capacity and capability shortages.
- Establishing improved lines of communication with Wellington Water and establishing appropriate escalation protocols in addition to the regular meetings and transparent reporting.
- Ensuring that the WWTPs are adequately staffed and equipped to oversee the operational demands and compliance requirements.
- Defining clear roles and responsibilities and implementing performance metrics to hold staff accountable for compliance.
- Providing ongoing training for all operational staff to ensure they are knowledgeable about the challenges associated with aging WWTPs, treatment processes, and regulatory requirements to ensure compliance.
- Encouraging a culture of collaboration with Wellington Water staff, focusing on shared goals and mutual respect, while maintaining the contractual obligations at all times.
- Conducting regular performance reviews of frontline operational staff and treatment processes to monitor compliance and promptly address any issues.
- Developing a proactive risk management strategy to anticipate potential issues and implement preventive measures.

## Recommendation 2 – Enhance Contract Management Capability

Wellington Water can significantly enhance its professional contract management capability, ensuring a more effective and collaborative relationship with Veolia while delivering value to shareholding councils.

- **Defining and Clarifying Scope and Role** - Clearly define Wellington Water’s role in managing the contract with Veolia. This includes actively managing client risks and obligations and ensuring all contract obligations are met. Establish a formal agreement within Wellington Water that outlines the scope of its responsibilities and authority in the contract management process.

- **Assessing and Developing Team Structure** - Conduct a thorough assessment to determine the optimal size, structure, skillset, and competencies required for the contract management team, ensuring the team includes professionals with expertise in contract management, wastewater treatment operations, asset management and collaborative working environments.
- **Providing Training and Development** - Implement training programs to develop the necessary skills and competencies within the contract management team, focusing on training that enhances collaborative skills, emphasizing teamwork, communication, and problem-solving.
- **Implementing Effective Governance Structure** - Establish a robust governance structure for the contract management team. This should include regular oversight meetings and performance reviews. Consider including senior management from Veolia and external members with relevant experience to provide oversight and strategic guidance.
- **Developing and Implementing a Performance Management Framework** - Identify and implement monitoring and reporting of key performance indicators (KPIs) that align with contract requirements and strategic objectives. Use lead indicators to drive a more pro-active performance approach. Use performance data to enable proactive intervention when required, rather than as punitive measures.
- **Continuously Improving Contract Management Processes** - Regularly review and update contract management processes to ensure they are delivering effective and efficient outcomes with issues being closed out and lessons learnt. Focus on delivering value to Client Councils by ensuring contract management processes are aligned with their needs and expectations.

### Recommendation 3 – Enhance Asset Management Capability

Both, Veolia and Wellington Water, need to enhance their individual and collective asset management capability. Since the WWTPs are old and assets in need of replacement, the two organisations need to work together to develop the appropriate management of critical components to ensure the compliance standards are being met. The roles and responsibilities of Veolia and Wellington Water in the asset management plan needs to be clearly defined and a collaborative framework established for decision-making. Both organisations must be aligned in their efforts to maintain and renew assets. The required areas of capability and capacity required have previously been identified in the 2021 Review and the “Beyond Compliance” task force actions. Veolia and Wellington Water can enhance their asset management capabilities, ensuring the sustainability and reliability of their wastewater treatment plants while maintaining compliance with environmental regulation by addressing the following:

- **Asset Condition Assessment** – Continue to conduct comprehensive assessments of the current condition of all equipment and infrastructure in the WWTPs and develop a detailed inventory of all assets, categorizing them by age, condition, and criticality to the treatment process.
- **Strategic Asset Management Plan** – Further develop a SAMP that aligns with the strategic objectives of both Veolia and Wellington Water, including clear goals for maintaining compliance with environmental regulations, meeting current and future capacity needs, and ensuring sustainability of operations.
- **Renewal and Replacement Program** – Continue to prioritise the renewal and replacement of obsolete and failing equipment (such as pumps, blowers, and aerators) and implement a phased

approach to asset renewal, ensuring that critical components are addressed first to minimise risks of non-compliance and operational failures.

- **Maintenance and Operations Plans** – Further develop detailed maintenance plans that include both planned and preventative maintenance schedules, establish protocols for emergency maintenance to address unexpected failures promptly and ensure timely repairs .
- **Redundancy and Spares Management** - Review the redundancy and spares inventory to ensure there is adequate backup for all critical components. Where redundancy is lacking, invest in additional spares and standby equipment to prevent treatment process disruptions.
- **Funding and Financial Planning** – Further develop financial plans that outline the funding requirements for asset renewal and replacement, and for Wellington Water to ensure shareholding councils provide timely and adequate funds for necessary renewals while Veolia maintains assets to prevent premature failures.
- **Risk Management** - Identify and assess risks associated with asset failures and lack of maintenance or renewal and develop mitigation plans to address these risks, ensuring that both organisations understand the potential consequences and are prepared to act.

## Recommendation 4 – Build High Trust in Relationship

While the relationships between the staff from the two organisations are respectful and congenial, there is evidence of mistrust in each other. It is necessary that the Veolia and Wellington Water operate in an environment of high trust and support, while maintaining the professional and contractual relationships. Veolia and Wellington Water can build a mutually trusting relationship through reliability, predictability and consistency. They need to create a collaborative environment where both organisations work effectively together for the benefit of the community by:

- **Fostering an Environment of Trust and Respect** – Encourage staff from both organisations to engage in behaviours that promote trust and respect. This includes transparent communication, accountability, and consistently meeting commitments. Recognize and celebrate achievements and efforts from both sides, reinforcing positive behaviours and actions.
- **Developing a Collaborative Charter** - Create a Charter that outlines the strategic purpose of the relationship, emphasizing the shared goal of benefiting the community. Include guiding principles for collaboration, such as transparency, mutual respect, shared accountability, and continuous improvement. Clearly define roles and responsibilities within the Charter to eliminate confusion and overlap.
- **Improving Communications** - Establish discipline, rigour and focus of purpose in the regular joint meetings (executive, management, operational) where progress, challenges, and solutions are discussed. Develop and adhere to communication protocols that ensure clarity and consistency in information sharing.
- **Standing Side-by-Side as Partners** - Promote a unified approach where both organisations present themselves as a team to stakeholders and the community. Encourage joint problem-solving sessions to address issues collaboratively rather than assigning blame.
- **Simplifying the Operational Environment** - Review the contractual framework to identify and remove confusion or misalignment of understanding with the desired collaborative approach.

Simplify operational processes and decision-making pathways to reduce complexity and foster a more cooperative working environment.

- **Rebuilding Trust and Confidence** - Veolia should commit to transparency in performance data and operational challenges, providing Wellington Water with accurate and timely information. Implement and demonstrate tangible improvements in WWTP performance to rebuild Wellington Water's confidence.
- **Joint Training and Development** - Develop joint training programs focused on best practices in WWTP management, compliance, and collaboration. Organize team-building activities to strengthen relationships and understanding between personnel from both organisations.

## APPENDICES

1. Terms of Reference
2. List of persons/organisations interviewed
3. Recommendations from the 2021 Review of Regional WWTPs
4. Veolia's "Beyond Compliance" Taskforce

# Appendix 1 – Review Terms of Reference



## 2024 RWWP Services Contract Review - Terms of Reference

### Background:

An Independent review of the Regional Wastewater Treatment Plant (RWWTP) Services Contract was carried out in 2021. The review recommendations were implemented and a significant improvement in a collaborative contract relationship approach to operational management has been delivered. Since September 2023 there has been ongoing compliance issues at the RWWTP's. A further review is deemed appropriate by WWL and Veolia to clarify the causes of poor plant performance and identify where further improvements may be made to bring the plants back to compliance.

### Deliverables:

By 01 July 2024, the Review team will:

- Deliver a 2024 RWWTP Service Contract Review Report to the respective Senior Leadership Teams that includes:
  - An objective analysis of the current situation, performance of all parties and contract,
  - Recommended model changes and delivery improvements endorsed by the Review Steering Group
  - Recommendations designed to bring plants back to compliance.
- Have provided regular updates to the Review Steering Group and key stakeholders.
- Be cognisant of other initiatives in Wellington Water that affects WWTP operations in the region:
  - Consent conditions at RWWTP's
  - ongoing communications and reporting strategy for WWTP performance
  - WWTP condition assessment activities and other technical reports that are pertinent and available (draft or final)
  - Capital works and other plant or network upgrades.

### Out of Scope:

- WWL/Client Council funding process (LTP) should not be reviewed although the availability and impact of funding decisions is in scope.

### Inputs:

- Regional WWTP Services Contract
- LTP and 2024-25 Statement of Intent (SOI)
- Veolia RWWTP Operational Resource Plans
- Management Plans
- Operational performance plans and audits
- AMP, SAMP, PM schedules
- Veolia Risk Management Strategy
- ISO55001 Asset Management
- Veolia Wellington WWTPs Action Plan to Compliance

### Roles and Responsibilities:

#### Review Steering Group

- Tonia Haskell – CEO – Wellington Water
- Emma Brand – Country Manager – Veolia ANZ
- Charles Barker – Director Regulatory Services - WWL
- Dan Spiller – COO Water – Veolia Australia
- Steve Hutchison – Chief Advisor WW - WWL

#### Review Team

- Raveen Jaduram, Independent Reviewer
- Roly Frost, Independent Reviewer

#### Key resources

- Jeremy McKibbin – GM NMG – WWL
- Dave Neru – National Operations Manager – Veolia ANZ.
- Blair Johnson – Head of Wastewater Contracts – WWL.
- Alex Phelan – Contract Manager – Veolia ANZ.
- Operational staff - WWL and VANZ – as required.

### Objectives:

- To confirm the main causal effects of non-compliance.
- To gain further insight into the on-going non-compliance of the WWTP's.
- To identify further improvements to the operating model.
- To identify any impediments to achieving long term, ongoing consent compliance.
- Review suitability of resourcing levels in terms of delivery of effective operational management, asset management and planning, to deliver long term ongoing compliance.
- Review contract management processes to ensure effective and efficient operations and delivery of value to Client Councils.
- Understand the implications of the capital funding process and constraints (if any) on compliance.
- Gain insight into optimising Veolia/WWL communication of incidents to stakeholders.

### Supporting Principles:

- Open and Inclusive – engage the honest views of all parties.
- Outcome focused – have a common goal of improving WWTP future performance to improve environmental outcomes.
- Collaborative – working constructively together.
- A holistic, broad review to ensure a strategic and sustainable response – 'nothing off the table'.

### Reporting and Comms:

- Reporting will include:
  - Fortnightly updates to inform discussions at the Steering Group
  - Updates to respective SLT's, as directed by Steering Group and as required.
- Key recommendations will be shared with stakeholders as they are refined and developed.
- Draft report to be issued to respective SLT's and Boards for input.
- The Steering Group will finalise the recommendations and accept the final report by 01 July 2024

## Appendix 2 – List of persons interviewed

Organisation	Name
Wellington Water	Tonia Haskell Jeremy McKibbin Blair Johnson Steve Hutchison Craig Shuttleworth Joemar Cacnio
Veolia NZ	Emma Brand Dan Spiller Dave Neru Alex Phelan Nico Robins Petra Vachova Gerhard Vosloo Rakin Shrestha
Independent Advisors	Mark Wollina (Stantec)

## Appendix 3 – Recommendations from 2021 Review of Regional WWTP

The following recommendations were made for Wellington Water and Veolia to make together:

### Recommendation 1 - Contract

Retain Veolia NZ as the contractor to operate and maintain the four metropolitan wastewater treatment plants within the existing contractual terms but with the proviso that the contract is continued on the basis that Veolia NZ commits to and delivers on the following improvements:

- Full compliance with resource consent conditions be demonstrated over the balance of the contract.
- A fit-for-purpose organisational structure, led by a customer-focussed Regional Manager, supported by a management and technical team with the requisite skills, and resourced by the necessary number of experienced operations and maintenance staff as are required.
- Restore the confidence of and maintain a trusted relationship with Wellington Water at all levels, from the Contracts Manager to the Board of Directors.
- Introduce innovations that were promised and are expected of a global water company to optimise the management and processes at the wastewater treatment plants, providing greater benefits to the environment and to communities. This includes open sharing of data between Veolia and Wellington Water.
- Participate in the asset management planning by Wellington Water by providing timely and effective critical asset condition information and plans for preventative maintenance and replacement and asset renewal.
- Provide leadership in the project management and delivery of the agreed capital upgrade programmes.

### Recommendation 2 – Contract Management

Significantly improve the contracts management capability within Wellington Water in relation to this contract and provide training, systems and processes to allow effective management of Veolia:

- Define and agree within Wellington Water, the scope of its role in the management of the contract with Veolia, ensuring that the client risks and obligations are actively managed
- Determine the size, structure, skillset and competencies required of the contract management team and assign and train the staff to function in the more collaborative environment required for this contract
- Clarify the roles and responsibilities of all staff related to the contract, including that of the Contracts Manager who should be Wellington Water's primary representative when dealing with Veolia



- Establish an appropriate governance structure for the contract management team, considering any potential benefits of including Veolia senior management and external membership to complement the requisite experience
- Communicate and share with Veolia staff, the vision, values and strategic objectives of Wellington Water and specifically of the outcomes expected from the long-term relationship between the two organisations. Open information sharing of data between Wellington Water and Veolia.
- Implement an effective performance management framework to ensure Veolia is meeting the requirements of the contract, to enable timely intervention by Wellington Water when required and not to be used as punitive measures

### **Recommendation 3 – Performance Management**

Wellington Water and Veolia to shape the organisational context necessary to provide social support and performance objectives that creates a high performing team and jointly prepare:

- A Charter of how the two organisations will work together to achieve the strategic purpose of the relationship for the benefit of the community.
- A Policy Statement as to how they will meet the objectives of sustainability, environmental and stakeholder expectations
- Register of environmental aspects and impacts for each of the four WWTP and their receiving environments (effluent, odour, noise, nuisance)
- Operational control procedures for managing significant risks – what, who, when, how
- Performance evaluation and audit plans – internal audit, external audit, inspection plans, frequencies and non-conformance and corrective action programs. These would be for all areas of significant risk and include asset management, treatment processes, relationship management, stakeholder communications and the like.

### **Recommendation 4 – Asset Management**

Improve the asset management and planning capabilities within Wellington Water in relation to this contract and provide clarity on the expectations from Veolia in preparing in preparing and delivering its plans:

- Ensure that Wellington Water has the functional capacity and capability to define and manage the framework around planning, designing and constructing replacement and new assets relating to the four wastewater treatment plants in the context of its wastewater system
- Wellington Water, in conjunction with its Client Councils, to set strategic objectives for the four wastewater treatment plants, including levels of service, statutory compliance, performance criteria, acceptable levels of risk, and how these are to be delivered within financial constraints

- Wellington Water, with the assistance of Veolia, to set standards and expected levels of asset inspection, audit and performance and key performance indicators and ensure effective communications to all staff involved in the operation of the treatment plants
- Wellington Water and Veolia to identify and agree on the components that each organisation is responsible for in the process of asset management planning and in the creation of asset (or facility) management plans – identifying critical assets, failure modes, predictive or degradation models, condition monitoring, options for risk mitigation, cost-benefit analyses, planned maintenance schedules, renewal and replacement programs and new capacity requirements to meet the strategic objectives
- Wellington Water and Veolia to agree on the definition of capital expenditure in relation to this contract and to document the agreed processes that will be followed to prepare relevant business cases, obtain approvals and deliver projects within scope, budget and program without adversely constraining the day-to-day operations at the wastewater treatment plants.
- Veolia should resource and upskill their delivery capability to undertake capital improvements within the plants on a timely and cost-effective basis up to an agreed value
- Implement the findings of the Worley NZ Review

## **Recommendation 5 - Communications**

Wellington Water and Veolia to prepare effective internal and external communications strategies, plans, roles and responsibilities to maintain an elevated level of trust and confidence with the community and all their stakeholders:

- Develop and clearly articulate policies for the protection of public health and natural environment
- Develop communications to address concerns around impacts to the environment due to growth in housing and the strategies for addressing infrastructure requirements
- Develop communications on the sustainability of the wastewater assets – aging infrastructure, funding and financing
- Develop processes for timely notifications to Client Councils, GWRC, iwi and communities of service interruptions and overflows to the receiving environments
- Encourage community participation in discussions, plans, challenges and solutions
- Review the way the contract is managed and communicated both between Veolia and Wellington Water and within the respective organisations
- Prepare and share the priority list of all significant environmental impacts, objectives and targets, and the schedules for addressing them

## Appendix 4 – Veolia’s ‘Beyond Compliance’ Task Force

The following has been reproduced from the Independent Review of the Regional Wastewater Treatment Plants (2021 Report):

Veolia NZ has established a task force to consider its own operations, entitled *Beyond Compliance*, with the aim of considering:

*“How can we, jointly, go Beyond Compliance and align our service with community expectations?”*

The Veolia task force notes the following in its Terms of Reference:

- *Veolia New Zealand is committed to a culture of sustainability, environmental awareness and compliance across all of its Wellington operations.*
- *Veolia’s early performance within the Regional WWTP Contract has fallen short of community and client expectations and has seriously impacted the trust and confidence of the community in Wellington Water.*
- *Veolia acknowledges the significant efforts required to rebuild the trust and confidence of the community in Wellington Water’s and Veolia’s capability*
- *In order to give Wellington Water confidence in our commitment the main objective of this task force is to review how Veolia delivers on our joint sustainability and environmental aspirations, identify opportunities for improvement, and reach new levels of environmentally sensitive operation.*
- *This Task Force will remain in place until Wellington Water have confidence in Veolia’s ongoing performance*

The Task Force has six principal workstreams, which are reproduced below (along their scope and the key initiatives being undertaken in each):

- **Staff and Training** - *how we structure the teams and operations at all plants and will review if staffing level/skills are adequate to ensure community expectations are met at all times.*
  - Staff interviews and changes (including a new contract manager)
  - Structure review with possible new roles
  - Technical Role review
    - Refresher training and clarity on roles and responsibilities
- **Communications** - *to ensure we better communicate with all stakeholders about the issues we are facing at the plants and how we address them, this will cover as well timely reporting of potential incidents*
  - To Wellington Water, within Veolia and supporting public comms
  - Enhanced collaboration framework
- **Process Optimisation** *expanding the existing work already undertaken to further review how plants are operated from a process perspective to optimise treatment.*

- Undertaking a ‘Paris review’ to optimise processes to improve individual plant performance, i.e.
  - Porirua Sludge Management
  - Western sampling data analysis
  - Moa Point dewatered sludge performance
  - Seaview detailed analysis of suspended solids plant performance
    - Carey’s Gully peroxide dosing optimisation
  
- **Plant Upgrades** - *consider options for asset upgrades which could impact positively on plant performance, not only to meet consent, but to go beyond*
  - Identify key opportunities to improve plant performance (Paris) 29 to date
  - Some delivered (Porirua Returned Effluent, solids handling at Seaview)
    - Some under development (Seaview SCADA upgrades, online sludge blanket monitoring for Porirua)
  
- **Asset Management** - *review condition assessments, maintenance practises and critical spare parts to make sure we minimise assets failures and their potential impact on compliance*
  - Implementing alignment to Wellington Water Criticality Framework
  - Preventative Maintenance plans under review
  - Critical spares inventory revision
    - Improved contingency planning
  
- **Culture** - *review our culture across our Wellington operations and make sure all employees are aligned to meet community expectations.*
  - Activity rigour – adherence and discipline
  - Key relationships and Team Charter
  - Communication expectations
  - Environmental incident process review