

28 July 2021

Greater Wellington Regional Council
PO Box 11646
Wellington 6142

Attn: Manager, Environment Regulation

Dear Sir/Madam

Re: Application for resource consent WGN200229 under section 95A of the Resource Management Act 1991

Submitter: Dr Jill McKenzie, Medical Officer of Health on behalf of Regional Public Health
Regional Public Health
Hutt Valley District Health Board
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Introduction

1. Regional Public Health (RPH) serves the greater Wellington region, through its three district health boards (DHBs): Wairarapa, Hutt Valley and Capital & Coast, and is based at the Hutt Valley District Health Board.
2. We work with our community to make it a healthier safer place to live. We promote good health, prevent disease, and improve the quality of life for our population, with a particular focus on children, Māori and working with primary care organisations. Our staff include a range of occupations including medical officers of health, public health advisors, health protection officers, public health nurses, and public health analysts.
3. The consents in the application that this submission relates to are:
 - Discharge permit [36727]: To discharge contaminants to air (odour) from the operation of the Porirua Wastewater Treatment Plant
 - Discharge permit [36816]: To discharge treated and partially-treated wastewater to the coastal marine area from the operation of the Porirua Wastewater Treatment Plant

Reasons for submitting

4. The reason for this submission is to ensure that the public health risks associated with the proposed activity are considered. The Ministry of Health requires us to reduce potential health

risks by various means, which includes making submissions on resource consent matters. The submitter is **neutral** and neither supports nor opposes the application.

5. Regional Public Health could not gain an advantage in trade competition through this submission.
6. Regional Public Health have statutory obligations under the Public Health and Disability Act 2000 and Health Act 1956 to improve, promote and protect the health of people and communities within the Wellington region. This includes reducing any adverse effects of discharges to the environment. The aim of this submission is to ensure that any potential public health effects are adequately considered by consenting authorities.

Discharge contaminants to air

7. Greater Wellington Regional Council and Porirua City Council have not received any formal odour complaints from residents in the surrounding area. However, Wellington Water have met with the owner of Pikarere Farm, which adjoins the Porirua WWTP site, to discuss occasional individual minor odour events.
8. RPH notes that the Assessment of Environmental Effects for the discharge of odour to air provided in the application has found that any environmental impacts will be less than minor at the site boundary.
9. Odour has the potential to cause adverse effects on people's lives and wellbeing and can lead to direct and indirect health effects. Therefore, RPH would wish to see consent conditions remain around implementation of an Odour Management Plan (OMP) including a complaints register, source identification and investigation procedure. A review of the effectiveness of the OMP will also be important.

Wastewater discharge to coastal marine area

10. Public Health recognises that poor water quality is one of the key environmental factors that can contribute to reduced health and well-being, and disparities in health outcomes. Minimising the impact of wastewater discharges on water quality is therefore critical to good health outcomes. Although wastewater discharges to the coastal marine area have the potential to cause poor water quality, it is also important that there exists a safe way of managing sewage so people are not in direct contact with untreated sewage in built-up areas.
11. For the discharge to the coastal marine area, the potential risks to health are from direct contact with water containing human pathogens via recreational water use, or via the gathering and consumption of contaminated Mahinga Kai. The level of risk is dependent on both the level of the contaminant people are exposed to and the number of people who are exposed.
12. RPH notes that the Porirua Wastewater Plant Reconsenting Recreational Assessment¹ found that shellfish gathering and fishing occurs at very low levels at Rukutane Point i.e. few people are

¹ Appendix-O- J Porirua WWTP Recreation-Assessment

exposed to any potential health risk. Furthermore the Quantitative Microbial Risk Assessment (QMRA)² found that the level of treatment achieved by the Porirua WWTP during average flows, will not be associated with any observable health effect for people eating raw shellfish at three established shellfish gathering sites.

13. The QMRA also assessed the risk of accidental ingestion of potentially polluted water and the inhalation of aerosolised viruses at several sites (including Titahi Bay Beach) within the vicinity of the discharge. The model showed that the average discharge flow would not result in an observable health effect. This is based on a level of sewage treatment which is below the current level of treatment achieved by the plant. Regional Public Health considers that public health risk can be adequately managed if the standard of treatment of at least 3-log virus concentration reduction is maintained at the Porirua WWTP.
14. It is important to note that the assessment of public health risk from recreational water use and kaimoana collection is limited to the WWTP discharge. It does not account for risk from discharges in other parts of the network e.g. sewage leaks or contaminated stormwater, or general run-off during heavy rainfall. Furthermore, the QMRA does not assess health risks from peak wet weather flows as they occur infrequently in association with storm conditions, i.e. the public health risk is managed via limited usage of the coastal marine area during these conditions and generic advice that recreational water use is not recommended within 48 hours of heavy rainfall. Specifically for shellfish collection, it is noted there are very few filter feeders in the vicinity of the discharge. This manages the risk of these types of shellfish being exposed to partially treated overflows, given they concentrate pathogens and can remain contaminated for periods longer than 48 hours.
15. Regional Public Health were part of a project collaborative group that had input into the alternatives assessment process³ that explored options using the multi-criteria analysis. The initial work included joint review of managing both the WWTP and the sewerage network discharges. This clearly demonstrated that a ‘whole of network’ approach was critical to managing sewage infrastructure to protect public health.
16. Regional Public Health understand that due to the timeframe for the WWTP consent renewal, the proposed solution for the WWTP discharge from the collaborative group project, is the basis on which the current consent application has been submitted. Regional Public Health agrees that the recommended proposed solution is the best practicable option with the funding currently available – a process recently subject to public consultation with the Long Term Plan. The proposed option will also support planned upgrades in the wider wastewater (and stormwater) public network – upgrades that are necessary to prevent untreated sewage overflows in the network and to support a flow level of wastewater able to be fully treated at the WWTP.

² Appendix J Porirua WWTP Quantitative microbial risk assessment (QMRA) of the Porirua WWTP discharge and receiving environment

³ Appendix C Porirua WWTP Wastewater Discharge Alternatives Assessment Report April 2020

17. We note the application proposes that full treatment capacity improvements will be scheduled for completion by the end of June 2023. This will allow full secondary treatment and UV disinfection of all inflows (up to 1500 L/s) to the Wastewater Treatment Plant (WWTP). The application seeks to consent discharge of partially treated wastewater into the existing outlet at Rukutane Point and considers this is unlikely to result in direct physical health harms. This is on the basis that discharges caused by bypass events being limited to flows not exceeding 1200 L/s occurring for less than 0.1% of the time (<9 hours) during the period 2016-2019.

18. Whilst it is important to minimise wet weather overflows of treated and partially treated effluent, Regional Public Health recognises that there are significant challenges in managing wastewater overflows. An upgrade to the wider wastewater public (and private) network system will also be necessary to prevent overflows at the WWTP, particularly considering the projected increased flows due to climate change and population growth in Porirua. However, until such upgrades occur, intermittent overflow discharges from the Porirua WWTP are likely to occur. Public health risk from occasional WWTP overflows should be mitigated through:

- The Operational Management Plan that includes contingency plans in the event of plant malfunction
- Review of the treatment plant technology and monitoring programme within 10 years of issue of resource consent
- Further improvement to the treatment plant during the term of the consent
- A robust and effective public health risk communication plan regarding overflows.

19. Regional Public Health acknowledges that there are concerns by the local iwi and some residents regarding the application. We are aware that discharges of wastewater into coastal areas can be associated with indirect health effects, for example, in terms of a sense of loss around how the water is perceived. For local iwi it is acknowledged that the discharge of wastewater into Te Moana o Raukawa is closely linked to impacts on wellbeing. Regional Public Health would like to emphasise the importance of effective communications with the public and supports that Ngāti Toa continue to be involved in the decision making, the community liaison group maintained, and any other interested local groups (especially recreational water user groups) are engaged with.

20. Regional Public Health recommends that if the consent is granted that it includes a requirement for the applicant to develop and implement a Public Notification Strategy of discharge overflow events. This should include notification of local iwi, the community liaison group members, and key contacts in recreational water user groups, and use a number of different methods for communicating with potentially impacted people. This is in addition to the proposed conditions currently in the application.

21. Regional Public Health acknowledges that the impacts of climate change⁴ are a critical factor that needs to be planned for to ensure protection of public health from exposure to sewage or wastewater. The predicted impacts of more frequent extreme rainfalls require further work to ensure sewage is safely disposed of – i.e. increased frequency of extreme rainfall has the

⁴ Appendix-D-Porirua WWTP -PopulationAppendix-E-Emerging-contaminants

potential to cause flows of >1500 L/s. Critical to managing the impacts of increasing extreme rainfall are improvements within the sewerage network (e.g. storage options), to reduce the number of times influent flows will exceed the WWTP capacity for full treatment. These network improvements are also required to avoid sewage overflows into the harbour or onto roads and private property.

22. RPH is comfortable with the discharge permits being granted for a 20 year period, noting that the Draft Infrastructure Strategy 2021-51 includes a proposal for significant investment in ongoing WWTP and network improvements, and the review periods built into the consent conditions.

We have served a copy of this submission on the applicant. We are happy to provide further advice or clarification on any of the points raised in our written submission. The contact point for this submission is:

Jessica Cooper, Heath Protection Officer, Regional Public Health
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Kind regards

Dr Jill McKenzie Medical Officer of Health	Peter Gush General Manager
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Address for service

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