

# Auckland Regional Public Health Service

Rātonga Hauora ā Iwi o Tamaki Makaurau



Working with the people of Auckland, Waitemata and Counties Manukau

## Auckland Regional Public Health Service

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### Watercare Resource Consent Application – Warkworth and Snells Beach / Algies Bay Wastewater Treatment Plants

Thank you for the opportunity for Auckland Regional Public Health Service (ARPHS) to provide a submission to Watercare's proposal to upgrade the wastewater treatment services provided to the communities of Warkworth, Snells Beach, Algies Bay and Martins Bay.

The following submission represents the views of ARPHS and does not necessarily reflect the views of the three District Health Boards it serves. Please refer to Appendix 1 for more information on ARPHS.

The primary contact point for this submission is:

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Yours sincerely,

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## Overview of proposal

1. Public health matters pertaining to Watercare's application include the potential adverse effects on recreational waters and shellfish gathering sites from treated/untreated wastewater discharges entering into Mahurangi Harbour and the coastal marine area off Martins Bay, as well as odour effects.
2. Having reviewed the application and supporting material, we support the overall proposal, as it will cater for the expected population growth in the Warkworth and Snells Beach areas, and result in the complete removal of treated wastewater discharges from the upper Mahurangi Harbour, which will happen when the existing Warkworth wastewater treatment plant (WWTP) is decommissioned. This will have a positive impact on the commercial oyster farms in Mahurangi Harbour in the long term.
3. We also support the improved WWTP operations proposed during the transition period, which will improve the quality of the existing discharges. In particular, we note the proposed short-term MBR upgrade at the Warkworth WWTP will help to achieve a 4 log removal of viruses.

## Requested decision

4. ARPHS supports Watercare's proposal, and recommends that resource consents be granted for the application. However, we consider the hearings Commissioner/panel should give careful consideration to the following matters when reviewing the proposal, and assessing its effects on the environment:

### Discharge of treated wastewater from new WWTP via new outfall

5. Watercare proposes to construct a new rising main and outfall to discharge treated wastewater from the new Snells Beach/Algies Bay WWTP, with the final discharge point approximately 420m offshore in Martins Bay. We note that Watercare is confident that there is a high degree of dilution within the coastal marine area (CMA) off Martins Bay, stating on page 113 of its AEE:

*"The high dilution that occurs in an open coast environment at the outfall (at least 250 times for average flow rates) would be unlikely to result in any significant or observable environmental effect caused by the nutrient loads and TSS discharged. A discharge median of 10 mg TN/L would be diluted to <0.04 mg/L within a few meters of the end of the outfall and significantly less as the discharge plume moves beyond the identified mixing zone (200 m). It would take a dilution of 1000 times, which*

*would occur within 10s of meters away from the pipe, for concentrations to reach background levels (median 0.010 mg/L for similar coastal sites nearby e.g. Ti Point).*

*Likewise for emerging contaminants and heavy metals within the discharge, the large initial dilution is more than sufficient to ensure that ecological risk from emerging organic contaminants (“EOCs”) is low...*

*Beyond 2051, there would be slightly less dilution near the outfall due to the greater discharge volume from the outfall however, dilutions will still be at least in the order of 190 times. Therefore, when compared to background levels, it is not expected that there would be a change in concentration of nutrients or other contaminants beyond the immediate vicinity of the discharge.”*

6. Despite the applicant’s assessment, we seek assurances that locating the outfall at a greater distance from the shoreline is not required. We believe the following matters are important when considering the effects of the discharge on the surrounding environment:
  - Option 1 for the construction of the rising main and outfall consists of 350m of trenching, suggesting a very shallow water depth in the CMA. We note from the AECOM report that the sea is only 8 to 10 metres deep approximately 400 metres offshore.
  - The AEE states the risk to commercial shellfish farms within the Mahurangi Harbour is likely to be negligible due to the separation distance from the outfall. However, we still have reservations given the applicant advises that the ‘wastewater plume tends to move to the southwest’, and therefore parallel to the beach and potentially into the (shallow) Mahurangi Harbour. We therefore support the proposed shellfish monitoring condition covering the Mahurangi Heads.
  - Discharge at particular points of the tide may be desirable.

#### Time period for monitoring of industrial contaminants in treated wastewater discharge

7. We note that all treated wastewater discharged from the existing Warkworth, existing Snells Beach/Algies Bay, and new Snells Beach/Algies Bay WWTP’s will be monitored for heavy metals, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and organochlorine pesticides (OCs). The application states that the monitoring of these contaminants will occur quarterly for a two year period.

8. ARPHS was unable to locate the rationale for this two year temporary monitoring period in the information provided by the applicant, and requests that Watercare provide clarification for why the monitoring of these contaminants has been promoted on a temporary basis.

#### Consistent conditions for monitoring of treated wastewater from all WWTPs

9. We note monitoring of E.coli in treated wastewater discharge samples is only proposed for the existing Snells Beach / Algies Bay WWTP. While this might be reflecting the existing situation, and the different levels of treatment provided, we believe monitoring for E.coli in treated wastewater samples should occur for all three WWTPs.

#### Viral Monitoring Plan Conditions

10. We note Watercare's proposed consent conditions 27(c) (*Warkworth WWTP short-term discharges*) and 43(c) (*Snells Beach WWTP short and long-term*) pertaining to its viral monitoring plan state that:

*"When informed by the Auckland Regional Public Health Service of any suspected outbreak of communicable disease in the community that could adversely affect the [Mahurangi Harbour marine farms/ recreationally targeted shellfish / kaimoana] via the discharge from the WWTP, the Consent Holder shall respond by monitoring viral reduction through the WWTP as per the VMP and the results from the monitoring shall be made available to the [downstream marine farms/public] and the Regional Public Health as soon as practicable."*

11. We understand that consent conditions are only enforceable against the consent holder, but nevertheless seek confirmation that the above condition does not place a legal obligation on ARPHS to provide the service as outlined. We will endeavour to inform Watercare of any suspected outbreak of communicable disease in the community so it can take the necessary precautions at its WWTPs.

#### General comment to Watercare

12. While outside the scope of this consent application and project, ARPHS's preference is that all properties at Snells Beach, Te Kapa Inlet, and the properties on the western shoreline at Browns Bay, Pukapuka Inlet, Huawai Bay and Jamieson Bay be connected to the reticulated wastewater network where possible. The oyster farms are at considerable risk from enteric disease causing gastrointestinal pathogens sourced from failing septic tanks located around

the harbour. By reticulating these properties into the wastewater network, the risk of human effluent leaking into the harbour is largely removed.

13. Thank you for the opportunity to submit on Watercare's proposal to upgrade the existing wastewater treatment facilities at Warkworth and Snells Beach/Algies Bay, and construction of a new combined WWTP to support long term growth.
14. We do not wish to be heard in support of our submission and therefore will not be attending the Council hearing.

## **Appendix 1 - Auckland Regional Public Health Service**

Auckland Regional Public Health Service (ARPHS) provides public health services for the three district health boards (DHBs) in the Auckland region (Auckland, Counties Manukau and Waitemata District Health Boards).

ARPHS has a statutory obligation under the New Zealand Public Health and Disability Act 2000 to improve, promote and protect the health of people and communities in the Auckland region. The Medical Officer of Health has an enforcement and regulatory role under the Health Act 1956 and other legislative designations to protect the health of the community.

ARPHS' primary role is to improve population health. It actively seeks to influence any initiatives or proposals that may affect population health in the Auckland region to maximise their positive impact and minimise possible negative effects on population health.

The Auckland region faces a number of public health challenges through changing demographics, increasingly diverse communities, increasing incidence of lifestyle-related health conditions such as obesity and type 2 diabetes, infrastructure requirements, the balancing of transport needs, and the reconciliation of urban design and urban intensification issues.