

Whaingaroa / Raglan WWTP Discharge Consent

Application Project

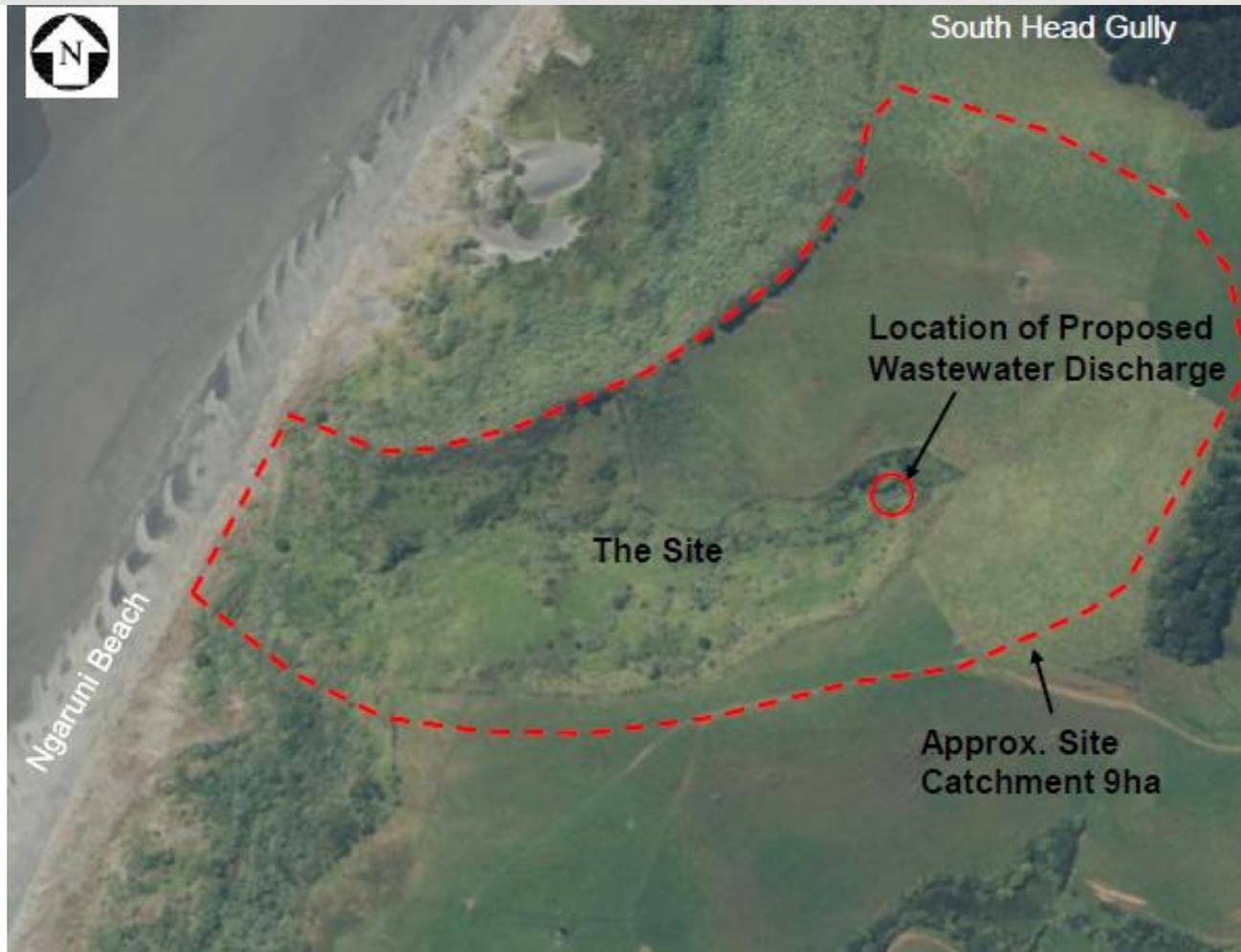
April 2025 – Community Update



Hydraulic Assessment of Overland Flow Path

- The assessment focuses on how the proposed discharge may influence flow velocities, depths, and erosion potential along the gully and dune system.
- The permeability testing of the sand dunes will be completed end of April and will help further inform the overall findings.

Hydraulic Assessment of Overland Flow Path



- Stormwater run off from the catchment discharges via a shallow overland flow path to the beach through the sand dunes
- A shallow erosional channel has formed across the beach caused by stormwater during rainfall events

Hydraulic Assessment of Overland Flow Path

- Modelling was done to compare changes in flow velocity and stream power (quantifies the energy a stream possesses to erode and transport sediment) if the discharge was introduced.
- It used rain fall data from Raglan Karior station to model 'normal day flows' vs heavy rain fall events.
- The model looked at present-day max flow rates right up to forecasted maximum flows in 2050.

OLFP extents for present-day rain fall events and present-day WW discharge flows



Figure 6: OLFP extent for different baseline present-day flow scenarios

The extent of the OLFP formed by WW discharge is insignificant compared to rain fall events.

Max flows for 2050 plus 100 year rain fall event



- Minor changes to OLFP , estimated to be less than 3% in some very local areas.

Wastewater only flows to 2050



Figure 10: Wastewater flow-generated OLFP

- Continuous discharge can leave a visible OLFP in the gully
- Permeability testing in the dunes will help determine the extent of OLFP

Summary of Findings

- The model results indicate that continuous flow from the proposed wastewater outlet may form a visible OLFP, but this will not likely create a permanent channel or significantly alter the gully's morphology.
- The OLFP generated by wastewater flows will be noticeable in dry weather conditions. However, during rainfall events, stormwater runoff will dominate the flow pattern.
- Model results indicate minor increases in velocity and stream power from wastewater flows. This will not pose a risk to erosion initiation or continual degradation of the channel.

Key Next Steps

- Meeting held with Te Kopua Board
- Meeting planned next week with the Wainui Reserve Development Working Group
- Planning for the planting continuing
- Air quality assessment has been completed
- How should we engage with the community on the technical results?