

Raglan WWTP Discharge Consent Application Project

Community and Key stakeholder Meeting March 2021

1) Welcome – Cr Bech

PART A

2) Draft MCA Scoring - Working through methodology;

PART B

3) Public Land Option Update

PART C

4) Additional consenting elements:

PART D

5) Wrap up/Queries – Cr/attendees

PART A: Scoring Progress

Raglan Wastewater Consent Project

Expert scoring – Public Health Quantitative Microbial Risk Analysis (QMRA)

Project Objectives

The aim of the project is to identify the best practicable option to provide wastewater services for the Whāingaroa community. In doing this we aim to:

- Keep communities healthy
- Protect the environment, particularly the water quality and ecology of the Whāingaroa Harbour
- Recognise the significance of the Whāingaroa Harbour to hapū and support the kaitiaki management of customary fishing
- Protect the community use of the area, along with the visitor experience
- Work in partnership with the community and hapū
- Retain flexibility for future, sustainable, long-term solutions including potential reuse of treated wastewater
- Keep the overall costs of the wastewater solution to affordable levels

MCA Assessment Criteria

Criteria	Issue/Topic	Description/Explanation
Public Health	Microbiological quality of treated wastewater	Risk of public exposure to waterborne pathogens through: <ul style="list-style-type: none">- Direct contact with the conveyance or treatment process- Direct contact with the receiving environment, for example through contact recreation- Indirect exposure, through food gathering (such as shellfish, fish, watercress, etc) and groundwater use.
	Health effects from irrigation	Risk of public exposure to pathogens from irrigation.
	Treated wastewater re-use	Risk of contamination from treated water for non-potable re-use.

Health Risks Assessment of Raglan WWTP
treatment and Discharge Options

QMRA Data Experts 29 March 2021

Raglan Wainui Options

DHI Water & Environment Ltd 23 March 2021

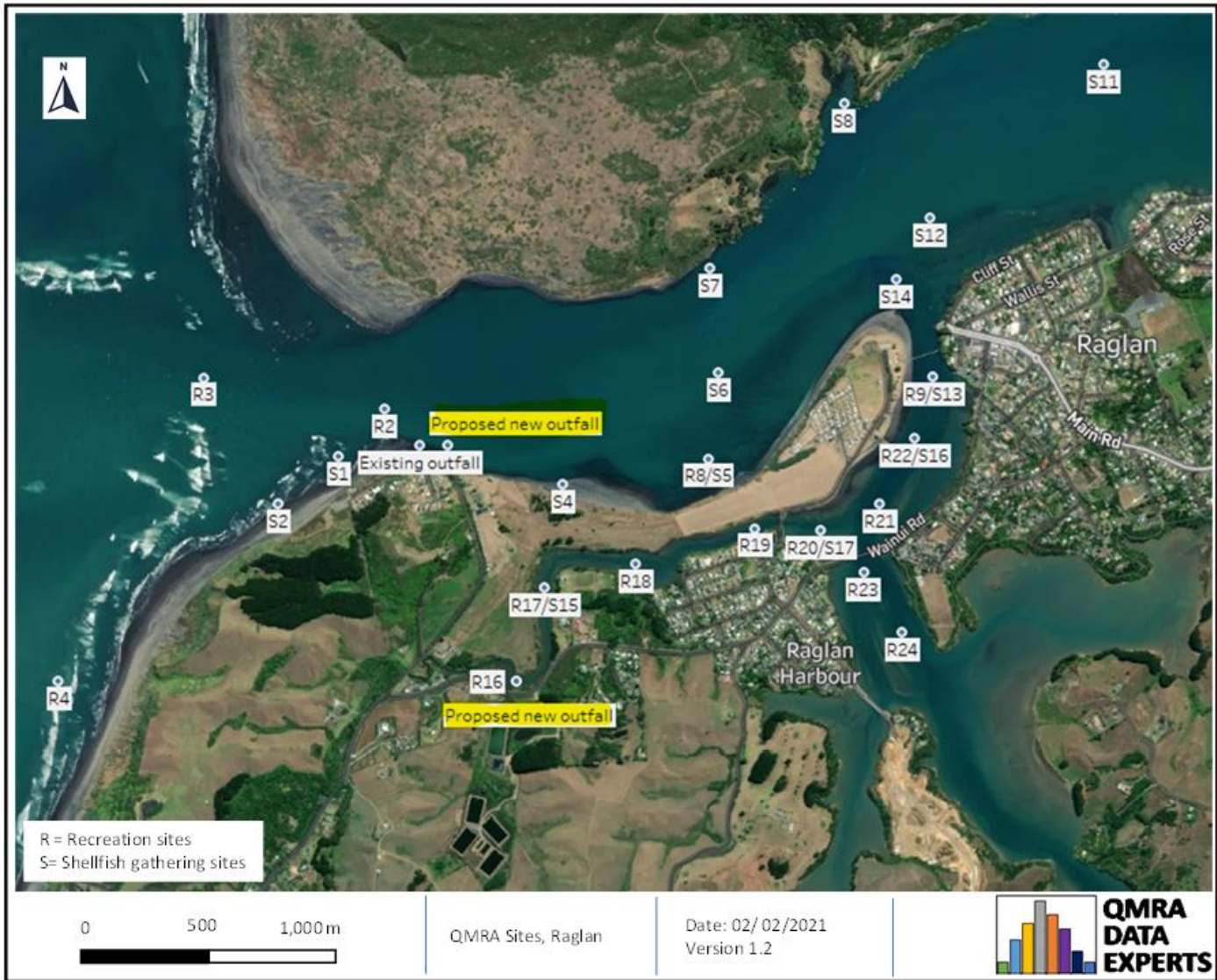
- Enteric illness risk (intestines)
- Acute febrile respiratory illness
- Raw shellfish consumption

Calibrated harbor model (2019),
enhanced to consider FW option

Analysis: Comparison of options consider:

- Predicted risk (reported as Individual Illness Risk (IRR))
- magnitude beyond the 'no observed adverse effects level' (NOAEL),





Plume dynamics – Scenario L1 (Public land/New outfall)

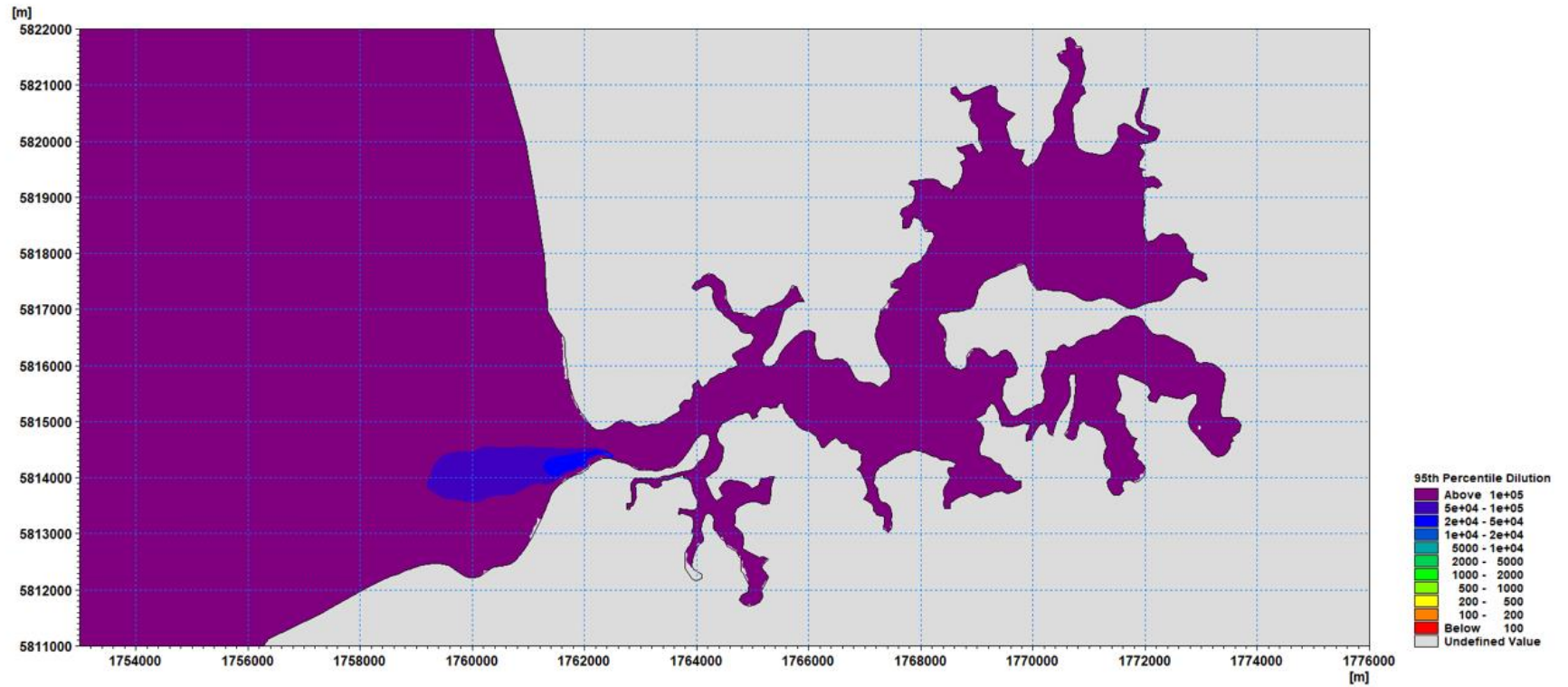


Figure 5-7. Predicted 95th percentile dilution for the January-March period for Scenario L1 (Public Land disposal plus New Outfall, 2025 Discharge rate).

Plume dynamics – Scenario F1 Wainui Stream

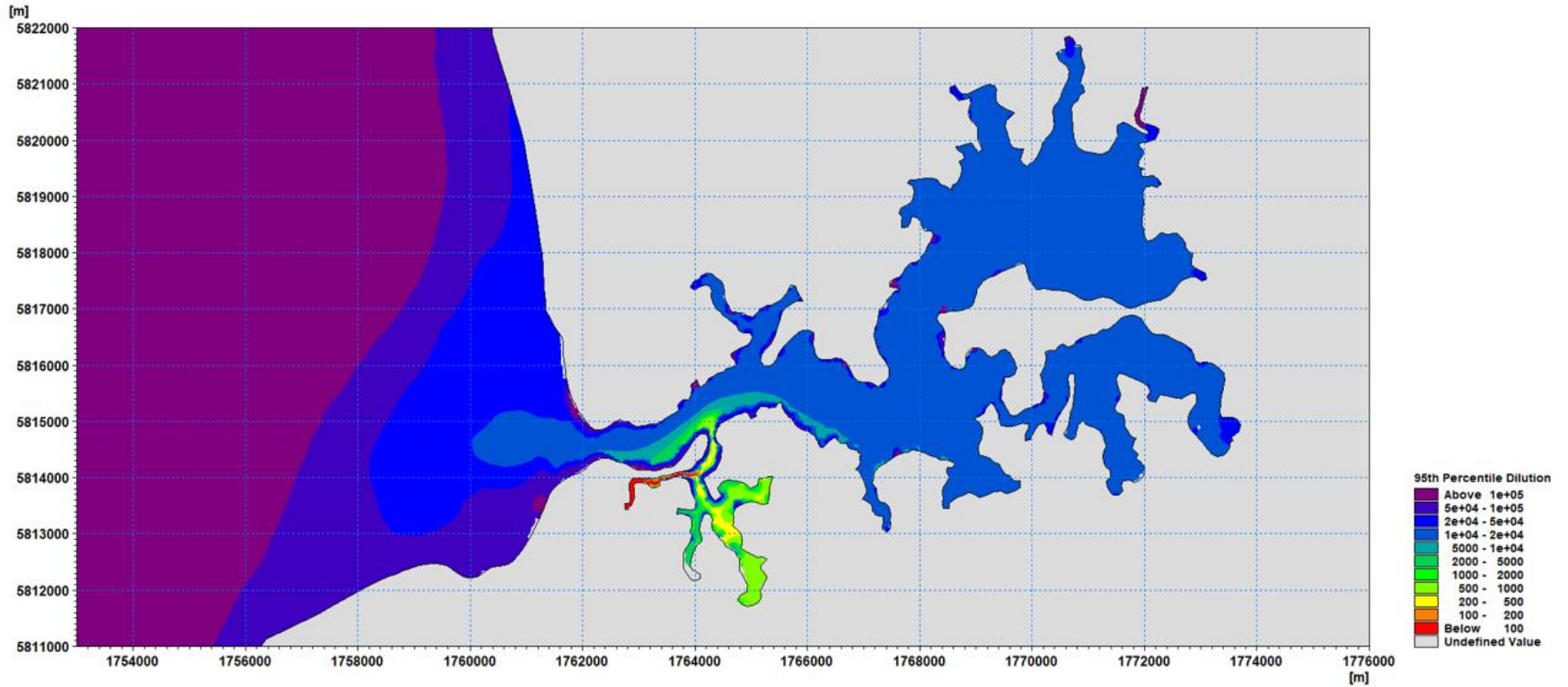
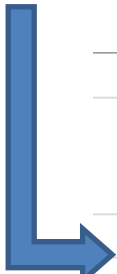


Figure 5-13. Predicted 95th percentile dilution for the January-March period for Scenario F1 (Wainui Stream, 2025 Discharge rate).

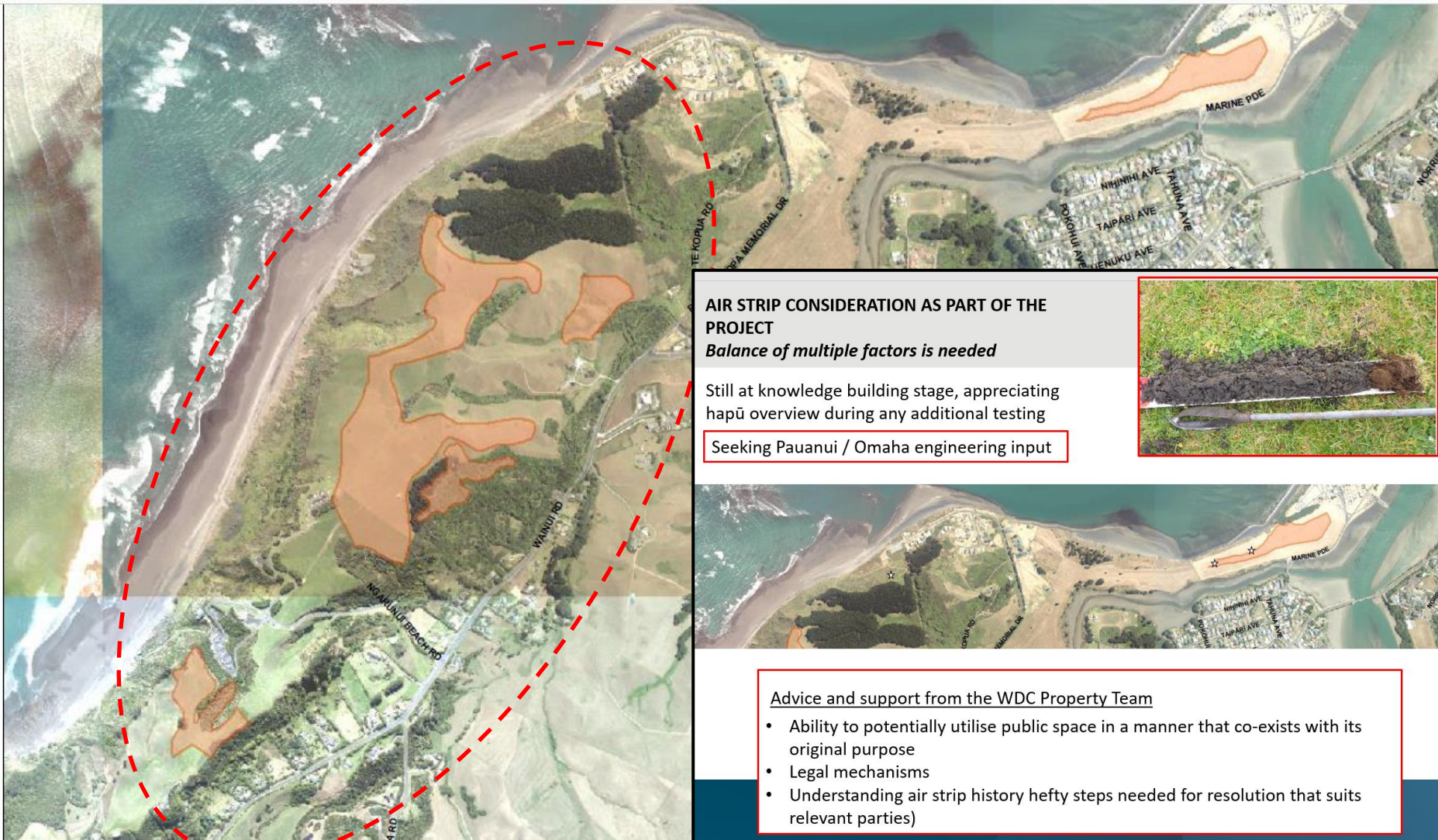
Broad Comment/MCA advice – *Chris Dada*

- Dilution and achievable virus log reduction associated with upgrade is the basis of QMRA
- Scenarios ranked in the magnitudes above the NOAEL,
- where draft M2 and L4 were the best among options.



Scenario	Treatment and discharge option	Overall MCA Score	Key
L4	MBR + UV , discharge to public land/outfall	9	MCA Scale (1-10, worst -best)
M2	MBR + UV discharge to new outfall	8	
L3	Tertiary membrane +UV, discharge to private land/outfall	6	
L1	Tertiary membrane +UV, discharge to public land/outfall	6	
M1	Tertiary membrane +UV, discharge to new outfall	6	
F1	MBR + UV discharge to Wainui Stream	3	
<i>L2 = 100% to land (MCA =10)</i>			

PART B: Option Investigations – Public land Option



AIR STRIP CONSIDERATION AS PART OF THE PROJECT

Balance of multiple factors is needed

Still at knowledge building stage, appreciating hapū overview during any additional testing

Seeking Pauanui / Omaha engineering input



Advice and support from the WDC Property Team

- Ability to potentially utilise public space in a manner that co-exists with its original purpose
- Legal mechanisms
- Understanding air strip history hefty steps needed for resolution that suits relevant parties)

PART C: Innovation/re-use/environmental enhancement)

PART C: Additional consenting elements beyond treatment and discharge (Innovation/re-use/environmental enhancement)

SOLAR

270kW solar array could be sized to fit area and has positive NPV.

Additional favourable considerations are:

- Initiative is consistent with consenting project objectives;
- Could be complimentary to other Raglan initiatives;
- Improved site resilience;
- Grid emissions reductions;



SOLAR (Innovation space) -Business case to be presented
progression in adherence to objectives;
Pending approval – work closer with Rick soon



Planting/Vetiver investigation
(Hapū/WSL)

23/3/2021



Coastal Protection Planting Trial (Area A)



Cultural Enhancement and Environmental Planting Trial (Area B)

JOINT Vetiver study
To consider
cultural/environmental/erosion fit





- **PART D** Wrap up/Queries – Cr Bech /Ian C