



MINUTES of the Raglan Wastewater Treatment Plant Discharge Consenting Process meeting (public) held on **Wednesday 24 February 2021** commencing 7.00pm through **ZOOM** Video Communications.

Present: Cr Aksel Bech (Chairperson), Ian Cathcart, Special Infrastructure Projects Manager (WDC), Carole Nutt, Waters Contract Relationship Manager (WDC)

Steve Howard, Richard Pullar (Watercare)

Chris Rayner, John Lawson, Edward Prince, Tony Oosten, Charlie Young

Apology: Rick Thrope

I. OPENING MEETING

1.1 Cr A Bech, Chairperson, opened the Raglan Wastewater Treatment Plant Discharge Consenting meeting (public) at 7.00pm.

The Chair outlined protocols for the Zoom meeting:

- The meeting would be recorded and posted on Council's web page.
- Chats can be seen by all meeting attendees. Use the chat function to record questions, and Steve would answer at the end of the presentation or offline at a later date if not appropriate to answer at the meeting.
- To get the Chair's attention, use electronic hand function.
- If asking a question, have camera on as courtesy to Steve.

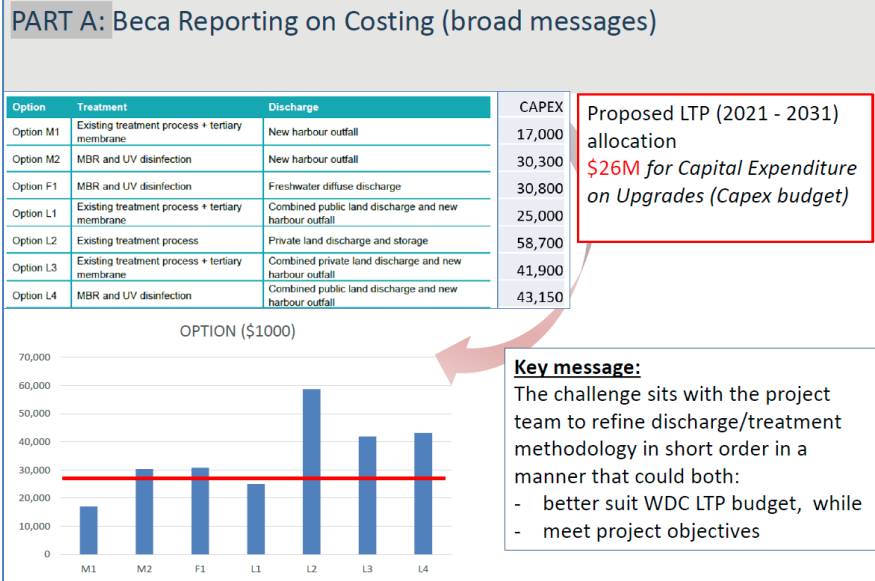
1.2 The purpose of the meeting was to hear Steve Howard's presentation on the Raglan Wastewater Treatment Plant (WWT) Discharge Consent Application Project.

2. PRESENTATION/TOPICS - Steve Howard, Watercare

2.1 Matters to discuss:

- Part A – Beca Reporting on Costing Broad messages
- Part B – Proposed steps now toward application preparation
- Part C – Additional consenting initiatives in progress
- Part D- Wrap Up/Questions

Slide 1



The purpose of this slide was to illustrate theoretical costs beside each, and consider preliminary upgrade allocation within the Long Term Plan (Council workshops underway now). A key point was that Councillors/Staff presently face the task of balancing multiple large upgrade needs within the district, with fixed methods to cover these costs (loans/rates/development contributions) – response to this will be for the project team to consider pathways/innovation that avoid discounting options strictly on costs.

Slide 2

Option L1- Public land discharge (additional tertiary) – to land 50% of the time (outfall needed)
(CAPEX= 19.5M for tertiary membrane upgrade (minus land irrigation proposal))

Option F1 – MBR – freshwater discharge (CAPEX = 30.8M)

= **11.3M** cost difference in step up in treatment for gains in TN/TP reduction

Evolving Investigation Work within WSL

Te Kauwhata Scenario –considering introduction of membrane aerated biofilm reactor technology (MABR)

Concept

The biofilm absorbs and consumes carbon and nitrogen-based pollutants, in an enhanced energy efficient manner (cost reduction)

Applicable?

4.2 Additional Tertiary Membrane

A tertiary membrane system is used in options M1, L1, L2 and L3. A tertiary membrane will improve TSS and pathogen removal predominantly. Post-pond data available from similar plants suggest a considerable reduction in the target parameters is possible, as well as a small reduction in nutrients.

The following median treated wastewater quality is expected from the tertiary membrane, based on the 12-month rolling median value (TSS) and geometric mean (E. coli, FC):

- TSS < 3 g/m³
- E. coli < 5 cfu/100mL
- Faecal Coliforms < 5 cfu/100mL
- TN < 17 g/m³, ≈38% reduction (based on similar Motueka system). This level of removal seems high based on organic N content of the TSS and if Aquamats are removed TN levels could increase. Further work is required to confirm the level of removal if this option is the preferred option.
- TP < 4 g/m³, ≈29% reduction (based on similar Motueka system)

The expected 90th percentile values for the same parameters are:

- TSS < 8 g/m³
- E. coli < 10 cfu/100mL
- Faecal Coliforms < 10 cfu/100mL

4.3 Membrane Bioreactor (MBR)

Options M2, F1 and L4 utilise an MBR system for treatment followed by UV disinfection. An MBR will produce a high quality treated wastewater with low nutrient and pathogen concentrations. The expected 90th percentile treated wastewater quality is outlined in Table 9.

Table 9: Expected Treated Wastewater Quality (90th percentile)

Suspended solids (TSS)	Biochemical oxygen demand (BOD ₅)	Ammoniacal nitrogen (NH ₄ -N)	Total nitrogen (TN)	Total phosphorus (TP)	E Coli
<5 mg/L	<5 mg/L	<1 mg/L	<8 mg/L	<1 mg/L*	<10 cfu/100ml

This slide emphasised the above point highlighting that Watercare/Project Team are still looking to narrow down treatment/discharge costs now through greater research and evolving options. Significant cost savings within MBR technology *could* lend to closer financial feasibility if an MBR solution becomes favourable within the MCA scoring. Additional consideration is whether such level of treatment is needed to avoid adverse effects in the estuarine environment.

PART B: Proposed steps now in steering toward application preparation



Jan Meeting Actions: Preliminary Multi Criteria Analysis (MCA) scoring needed when: Feb/March

CRITERIA
Public Health
Environment
Cultural
Social and community
Sustainability
Constructability
Technology
Financial Implications
Opportunities and Benefits
Statutory Policy Considerations

Criteria	Issue/Topic	Description/Explanation	MCA Specialist/Source of Information
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 	Outputs from Quantitative Microbial Risk Assessment (QMRA) of options with water discharge component – this will assess public health risks to contact recreation and shellfish gathering

Scoring = 1-10

Weighting between criteria = TBD

Costing is not part of MCA, rather a component in final BPO determination

Firming up positioning on options is initiated by MCA work. There will be multiple MCA scoring exercises needed as part of the project, where it is not expected that a single MCA can cover all KSH groups.

There will be differing opinions on the differing criteria. Some parts criteria headings require specialised scoring (i.e. Public health, with specialised modelling and Quantitative Microbial Risk Assessment to be undertaken by experts to understand treatment vs dilution vs risk to public health).

The Project Team need to educate and guide participants through this exercise (workshopping), where the intention is to distribute a worked example on methodology. Using this as a base example, individual groups may express support or disagreement toward scoring arrived at.

Timeline *SIGNIFICANT PROGRESSION NEEDED DURING MARCH*

From there, the following activities will need to be undertaken and facilitated by the project team:

- (i) additional workshopping to cover weighting between categories;
- (ii) introduction of costing lens (a parallel input toward determining a ‘best practical option’)
- (iii) memo construction that will be raised to elected Council, WDC Executive Leadership Team (ELT) and the Water Governance Board (WGB)

Timelines will be very tight to meet mid-July application lodgement (April, May, June will be needed for AEE preparation) however a working to a schedule is needed to avoid project drift if possible.

Slide 4

POTENTIAL MCA QUERIES

Why undertake an MCA?

*It is an application preparation tool to balance all considerations in a manner that mirrors RMA expectations. (legal requirement to assess effects against each other)
It is seen as best practice, where the process offers differing perspectives on options from differing sectors (what does Council think, what does project team and others think), allowing for a summary of positions to be feed into final Best Practical Option (BPO) decision making (Water Governance Board/ELT/Council)*

Why is costing not scored in the analysis?

Introduction of costs can influence environmental effect consideration. \$\$ is a separate lens to be applied to option determination. is at a different layer of consideration

Why is the MCA step necessary? Outcomes seem so straight forward?

An applicant to demonstrate a process has been used to arrive at a decision, that is reviewable by others. Process allows for greater co-decision making in considering the weighting of criteria, prior to BPO determination

Slide 5

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)

A positive advance through February has been feasibility to understand airstrip potential for discharge. This areas soil (sandy in contrast to clay) could allow for high-rate-passage, however, suitability for the site for such use is landuse requires close and straight forward communication between hapu, WDC and the project team.

– Progress is intended to be swift, with updates offered throughout work.

Slide 6

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;



Planting/Vetiver investigation



Planting/Vetiver investigation (Hapū/Wintec/WSL)



Spawning Survey –
Wainui Stream tributary
(under hapū observation)
Late March



Q: Why investigate these components?— part of meeting project initiatives, and demonstrates adherence to co-design philosophy, dual benefits such as mitigation through environmental enhancement and cost saving over life of the asset

Initiatives to continue with appropriate Raglan groups

Part D- Wrap up/Queries and Actions (*initial feedback or actions in red below*)

- John Lawson: Seeking clarity on private land costing within reporting distributed. The key point being that:
 - the land use report distributed early highlighted \$\$ benefits to cropping in respect to nutrients gained and irrigation through dry times, however this didn't appear balanced against costing for the 100% land option (L2 \$58.7M) that didn't recognise annual potential returns within Capex.

Action 1: *Steve to set up zoom with PDP author of both report and John to provide a response/view*

- Chris Raynor: 'who decides the weighting for the multi criteria is that WRC or WDC or WC ?'
This will be a process with multiple parties. There is ability to demonstrate differing scenarios that result from altered weighting. The key weighting influences should be the ability for scenarios to meet project objectives that were established at the start of the project (see attachment 1 below)

Action 2: *It will be a project teams job to:*

- *demonstrate weighting scenarios for KSH/Hapu,*
- *gain feedback, and*
- *present within the summary memo toward final application decision making*

- Chris Raynor: Is WDC allowed to build new infrastructure at low lying land in the climate change inundation zone?

Inundation data has been factored into mapping to date, where the WRC tool is located at the address below. This is an easy slider tool cover rise (m) at extreme levels. Infrastructure will not be at risk with any scenario.

Consideration of consent life is needed also. Design needs to cater for this timeframe (35yr is the max long-term consent) where consideration of climate change beyond consent timeframes will occur as part of future renewals.

<https://waikatoregion.govt.nz/services/regional-services/regional-hazards-and-emergency-management/coastal-hazards/coastal-flooding/coastal-inundation-tool>

- Tony Oosten: What is timing with consultation/MCA work with differing Raglan groups (wider community/ hapu?) Understanding acceptable cultural and environmental solutions will be paramount in narrowing feasible options for the wider community.
Steve response - The project team will need to distribute all MCA scoring scenarios, and weighing scenarios identically to groups, then work alongside all in a parallel manner so views can be recorded/ shared.
Cr Bech and Ian C have provided great overview and facilitation over the months of engagement. A schedule will be needed to reserve their time and expertise (i.e. to get the project to the next phase in the most efficient manner possible):
Action 3: Project team development on MCA/Weighting discussion memos and associated timeline for needed events (i.e. to provide certainty of dates for participants)
- Chris Raynor: At what point do we start talking more to Central government
Ian C response: Through government reform processes, WDC/Councillors have been liaising with central government as local government works through Tranche 2 matters (image below). Significant WW funding challenges sit with WDC in respect to the multiple WWTP upgrades needed for consents -central govt talks cover this collective cost. For Raglan specific actions, there is intended to be Water Governance Board visit soon to the township. Chris R seeks to understand this detail and ability for appearance also.
Action 4: Ian C to get back to Chris with his thinking on such an opportunity.
- Chris Raynor: what has been done to reduce storm water infiltration
Jan Zoom meeting had the detail on I&I shown below, which highlighted medium performance by the existing network in contrast to differing towns. Work continues with identifying how each pumpstation catchment within Raglan performs, to prioritise any renewal/fixes.

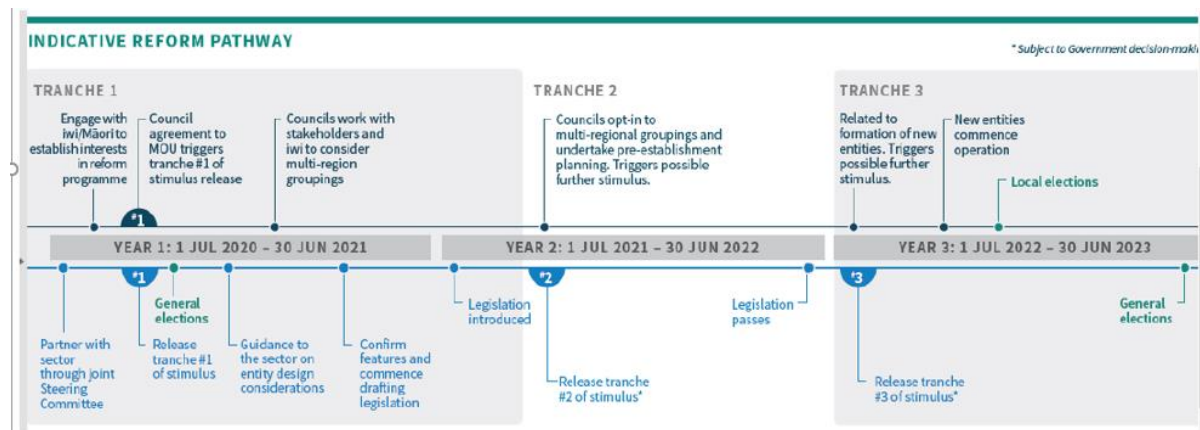
Attachment 1:

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:

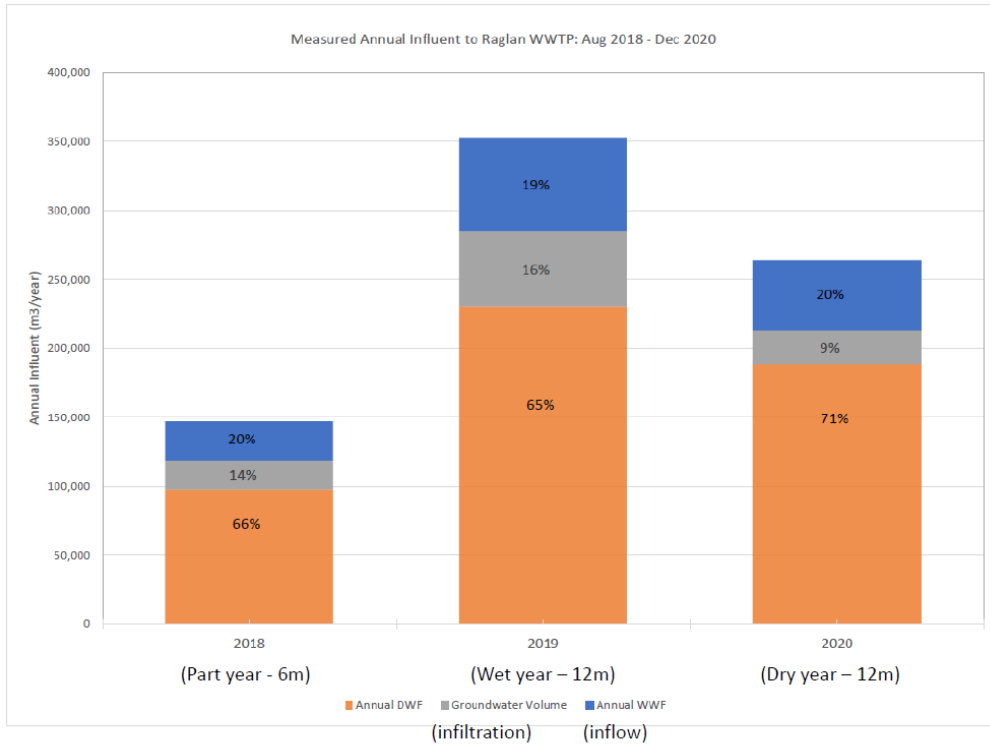
- Keep communities healthy
- Protect the environment, particularly the water quality and ecology of the Whāingaroa Harbour
- Recognise the significance of the Whāingaroa Harbour to hapū and support the kaitiaki management of customary fishing
- Protect the community use of the area, along with the visitor 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

Attachment 2



Attachment 3

PART C: I&I Update



Annual I/I Volume Benchmark

