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DISTRICT COUNCIL

#the BIG.  
Waste Water Story

# Wastewater Hui

*Porangahau and Te Paerahi Wastewater Treatment Plant Upgrade*

*26<sup>th</sup> July 2020*



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# Purpose of Today

- Time for an update
- How have you got on? Any information for us?
- Where we are at
- We need your help...please







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# Introductions



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# Who are we?

- Darren de Klerk – CHBDC (Project Director)
- Josh Lloyd – CHBDC (Group Manager – Infrastructure)
- Hamish Lowe – Lowe Environmental Impact
- Katie Beecroft – Lowe Environmental Impact
- John Crawford – BECA
- Nicola Marvin - BECA







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# Recap of Plan



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# What, Why, When and How?

What	Why	When	How
Wastewater treatment plants and discharge in both towns	The consents expire in 2021, the discharge and location is no longer acceptable	Changes are needed and proposed over 2021-2024	<ul style="list-style-type: none"><li>• Investigate →</li><li>• <b>Preferred Option</b> →</li><li>• Consent →</li><li>• Detailed Design →</li><li>• Procure →</li><li>• Build Stage 1 →</li><li>• Operate →</li><li>• Build Stage 2...</li></ul>







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# Where are we at



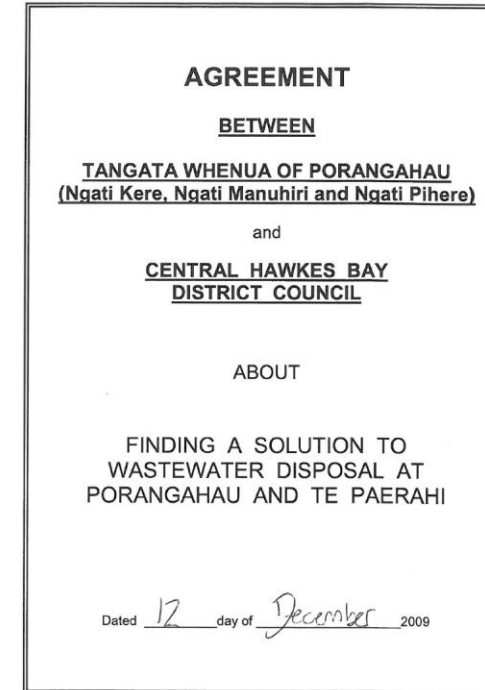
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# Checklist

## Past

- Acknowledge Council has not adhered to PEMT or the Long Term Strategy
- Cease river discharge at Porangahau
- Desirability of a new location for Te Paerahi treatment plant
- Cease dune discharge at Te Paerahi
- Desire to discharge to land
- CHBDC have been asked to come back with a solution(s)



Central Hawke's Bay District Council

## Long Term Wastewater Treatment Strategy for Porangahau and Te Paerahi

A report compiled by the  
Porangahau Environmental Management Team

June 2012

### 4.0 CULTURAL EFFECTS OF THE EXISTING TREATMENT PROCESSES

As part of the resource consent applications for the Porangahau and Te Paerahi wastewater treatment plants, a Cultural Impact Assessment was carried out by Anthony Tipene and Morry Black. This report was included in the evidence presented to the hearing, and copies of the report are available from Council upon request.

Ngati Kere made a submission to the resource consent hearing, a copy is attached at Appendix Five. Both the Cultural Impact Assessment and the Ngati Kere submission stated the significant cultural value of Te Taurekai and Puketauhinu. Both outlined that the discharge of human effluent to water or to land close to significant cultural sites, no matter how pure from a scientific perspective, is cultural anathema from the Māori perspective. As a result of these submissions, the hearing was adjourned while the District Council and Ngati Kere met and discussed their concerns. An outcome of these meetings was the signing of an agreement between Central Hawke's Bay District Council and Tangata Whenua of Porangahau to work together as the Porangahau Environmental Management Team to investigate solutions for the long term wastewater treatment and disposal for the Porangahau and Te Paerahi townships. A copy of that Agreement is in Appendix One.

The agreement states as its aim, "We agree that our intention is to find a long term solution for the treatment of effluent from Porangahau and Te Paerahi which is sustainable environmentally, economically, culturally and socially."

From the Agreement the following items were agreed upon:

- There is a need for improvements to the oxidation ponds as described in the proposed resource consents, including baffles and extra monitoring of the environment. These improvements are to improve the effectiveness of the existing oxidation ponds.
- Water from effluent should not be discharged directly into waterways (rivers, streams, sea) or places close to a drinking water source.
- The Te Paerahi oxidation pond needs to be removed.
- A level of flexibility must be adopted in considering improved wastewater treatment options to allow us to take advantage of new technological or other opportunities which may arise.
- A timeframe needs to be constructed that includes specific milestones that must be met to give certainty to the community. Some flexibility can be included as agreed by the parties from time to time.
- An ongoing relationship between the parties (the community and Council) must be maintained to ensure the achievement of our Aim.

Existing treatment and disposal processes, although improved from a scientific perspective since resource consent was granted, will not be acceptable culturally.



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# Checklist

## Current

- Minimise costs/ consider affordability – paying for things is a biggie
- Manage community growth
- Include locals (decisions, operation and monitoring)
- CHBDC have committed to changes
- Know limitations of river
- Know suitability of land
- Know there are cultural limitations and equally there are opportunities



# Checklist

- Going forward
  - Historical archaeological and cultural information creates “limitations” or “opportunities”
- We may need to discharge in or around the river when wet to avoid significant storage.. But can we build rules around this.
- We need to avoid archaeological and cultural sites: **OR DO WE?**
- How do we manage limitations and create opportunities?







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# River Assessments



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# Porangahau (Taurekaitai) River Assessment findings



- Catchment
  - Saline at discharge
  - Elevated upstream nutrient concentrations from farming and land use
- Treated wastewater
  - Downstream increase in faecal coliforms & total ammoniacal nitrogen
  - Other parameters in exceedance of guidelines, but upstream too
  - More present in summer low-flow conditions



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# Porangahau (Taurekaitai) River Assessment findings



- Conclusions
  - National Policy Statement for Freshwater Management will need to be considered for any options
    - Will mean despite having minimal impact all contributors to poor water quality will have to do their bit
  - Recommendation to include UV to reduce pathogens for full-time river discharges
  - There is scope for discharges during high flows with no noticeable increases in concentrations
  - If the discharge ceased completely there would not likely be a noticeable improvement in overall river health



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# Land Suitability



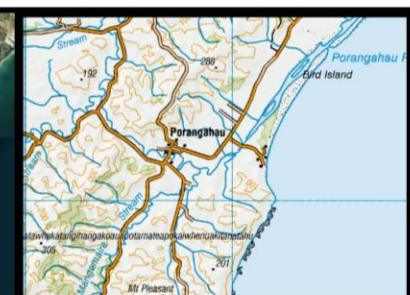
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# Land Suitability


- 10 km area around each WWTP investigated
- Considered soil depth and drainage, slope, fertility, land use, flooding, coastal zones, tsunami risk, archaeological sites, riparian buffers.
- Overlaid and scored maps to give Zones A to E
- A is most suitable, E is least suitable







**Legend**

 WWTP 10km Buffer

**L W E**  
Environmental  
Impact

APPROVED		
DESIGNED		
DRAWN	SM	

CLIENT

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PROJECT **10684**

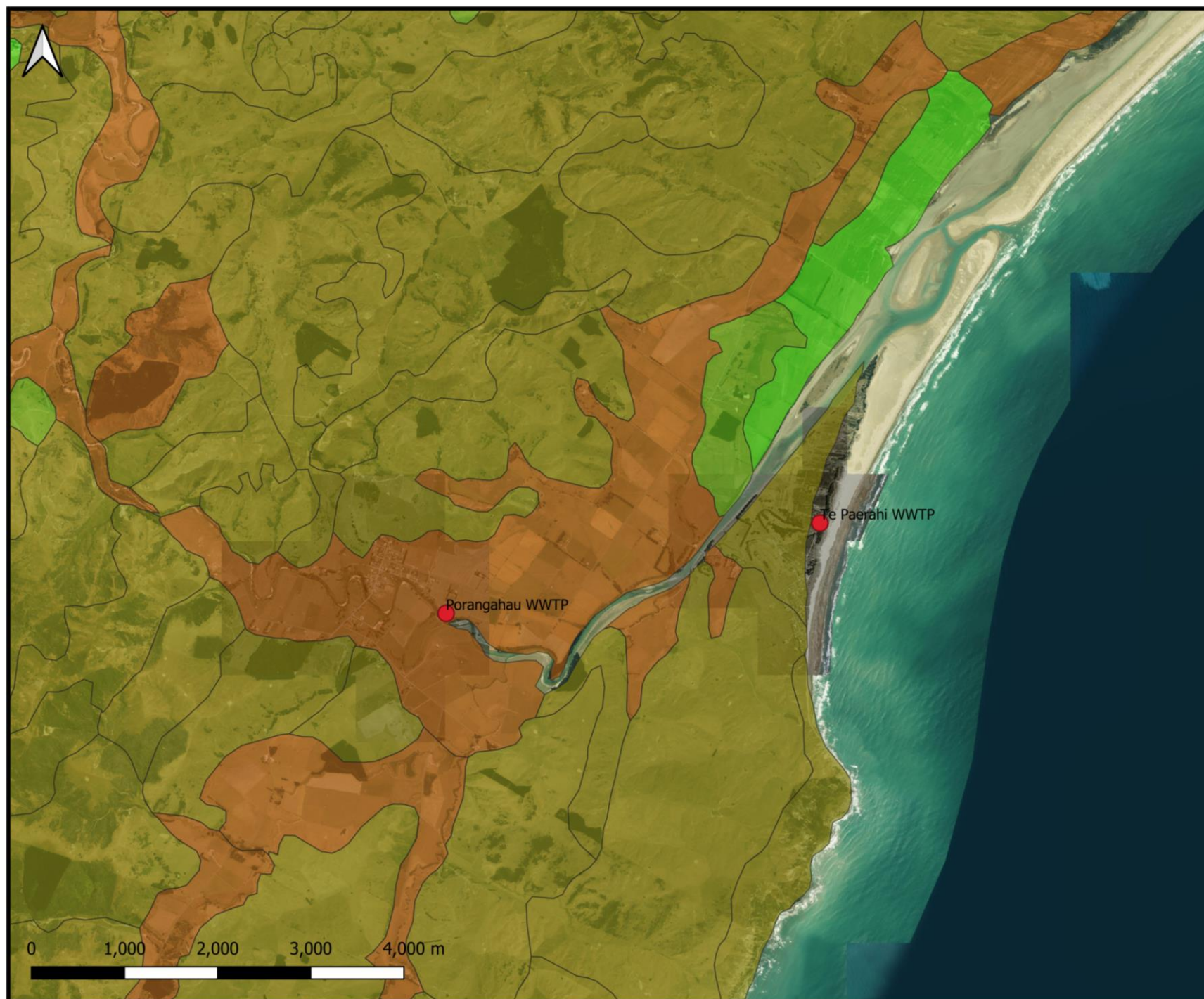
DRAWING TITLE  
**Investigation Area surrounding Porangahau and Te Paerahi**

DRAWING STATUS **FINAL**

DATE  
2020-07-23 16:23

FILENAME **GIS-10684-CHBDC-Layout-200311-SM.qgz** FIGURE ID 29





## Legend

Suitable Land Discharge Zones

- A
- B
- C
- D



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PROJECT	10684
DRAWING TITLE	Suitable Land Discharge Zones Surrounding Porangahau and Te Paerahi WWTP's
DRAWING STATUS	DRAFT
DATE	SCALE
2020-03-16 13:41	1:43,529.386428
FILENAME	FIGURE ID 14
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# Preferred Land

- Zone A and B land closest to both communities
- Close to route between the communities
- Is this land available?
- What do we need to be aware of?





# Check In / Feedback Opportunity



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# Options, Staging and Getting on with It





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# Existing WWTPs

## Porangahau Existing

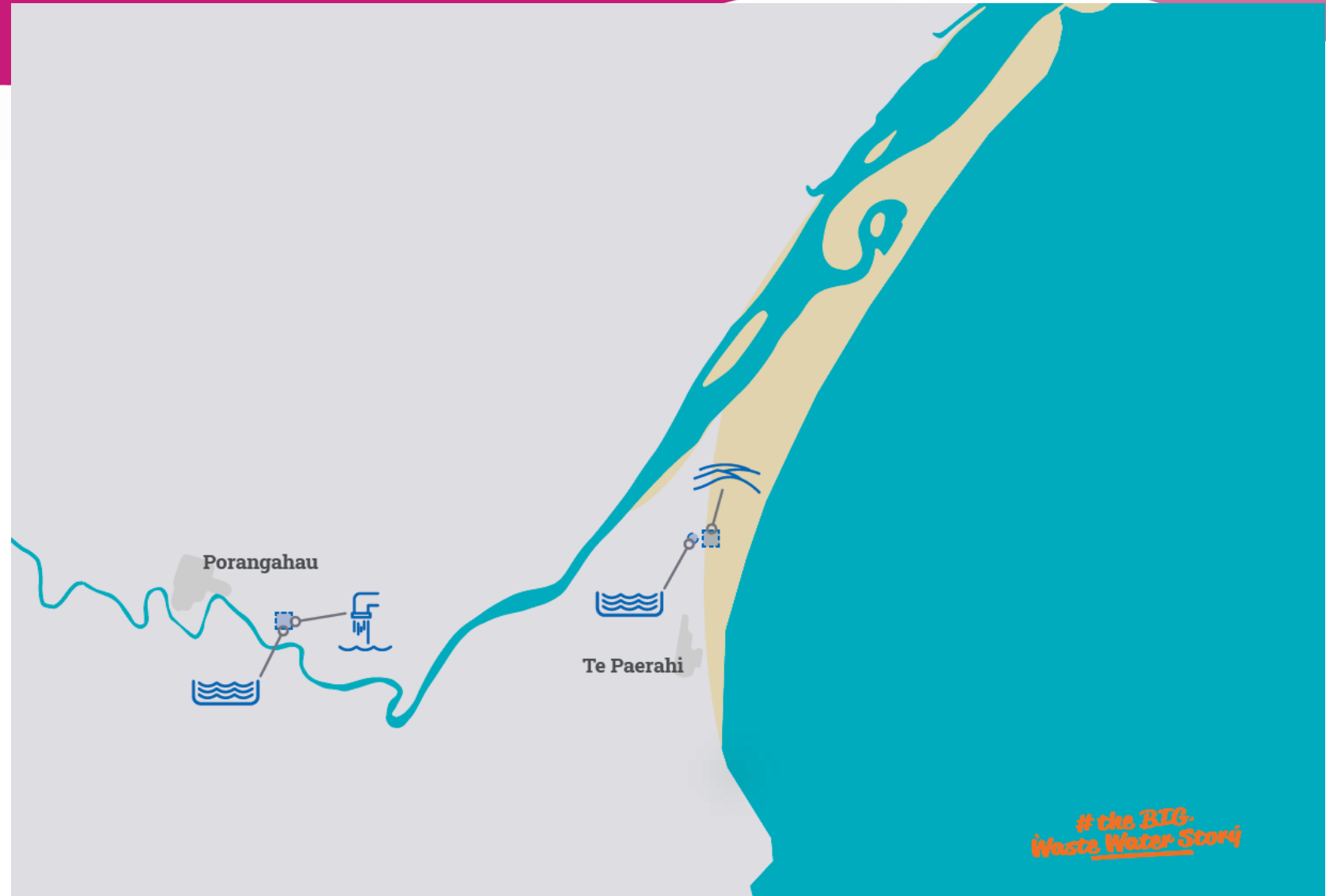
 Treatment: Existing pond

 Discharge: Existing wetland to river

## Te Paerahi Existing

 Treatment: Existing pond

 Discharge: Sand dunes



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# Stage 1

## Porangahau Option 1



*Treatment:* Existing pond with minor improvements



*Discharge:* Existing wetland to river

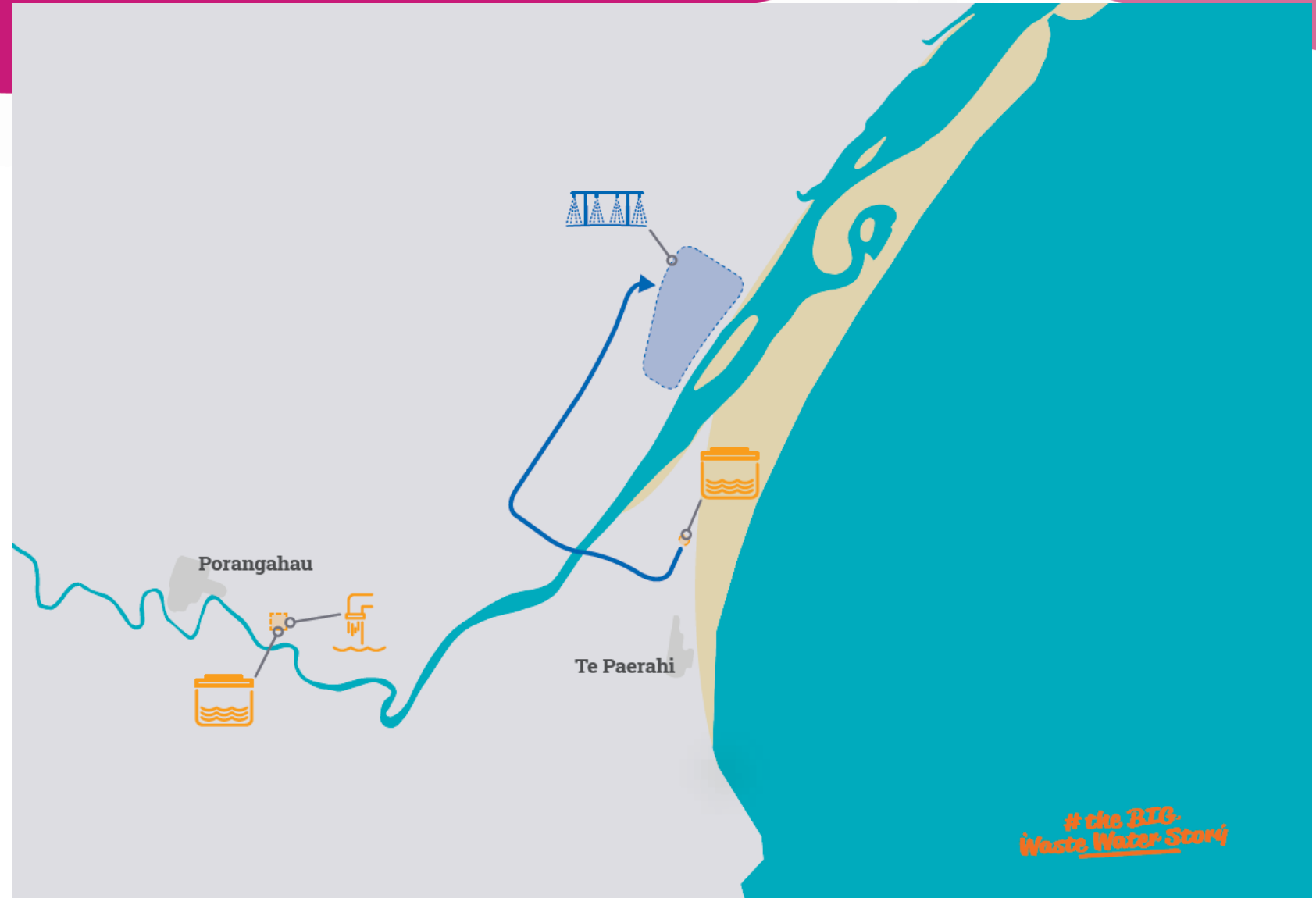
## Te Paerahi Option 1



*Treatment:* Existing pond with minor improvements



*Discharge:* Low rate land treatment




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# Stage 2


## Porangahau Option 2

 Treatment: Existing pond with minor improvements

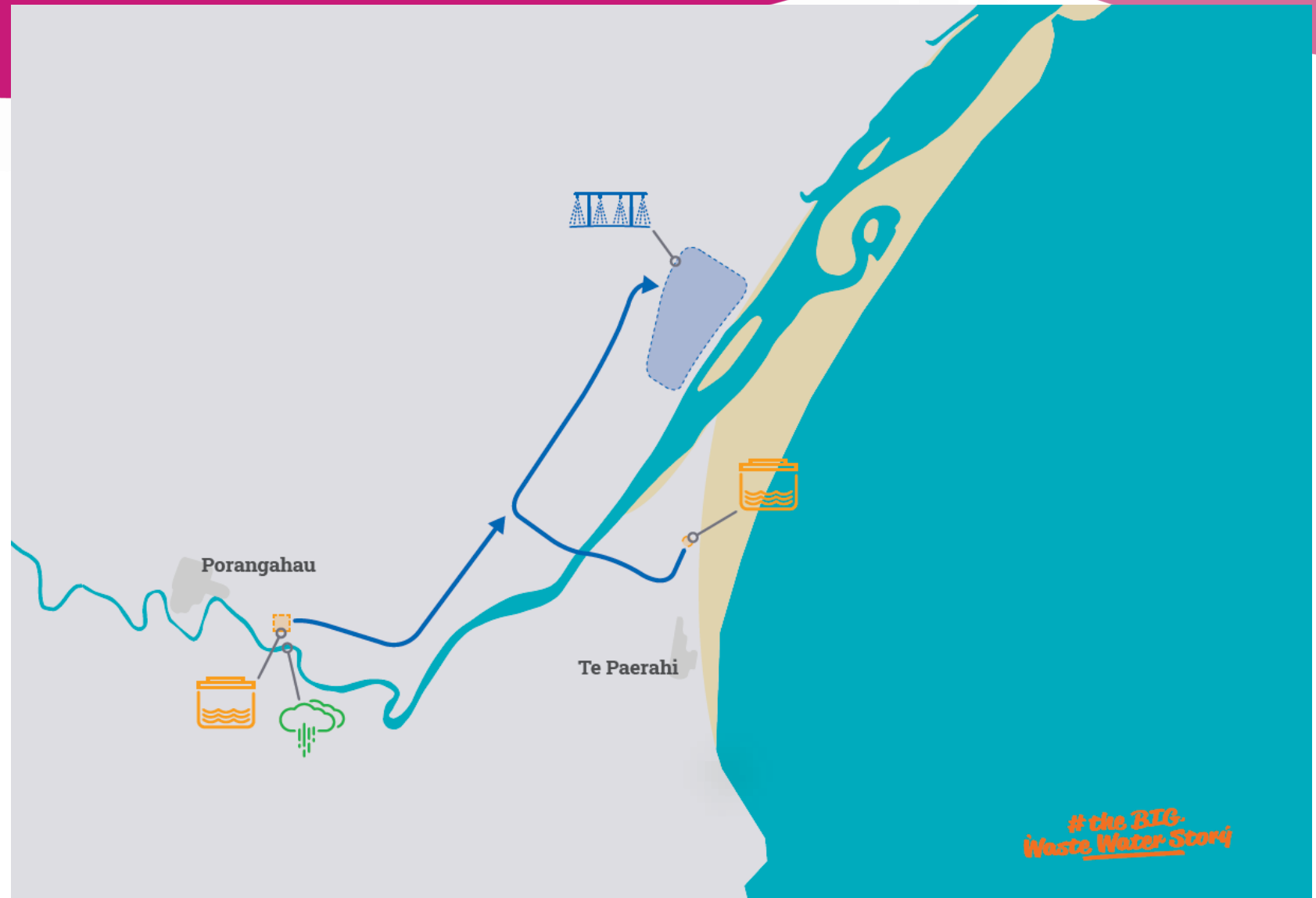
 Discharge: Low rate land treatment

 Wet: Wetland to river

## Te Paerahi Option 2

 Treatment: Existing pond with minor improvements

 Discharge: Low rate land treatment



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# Stage 3

## Porangahau Option 3



Treatment: New combined  
WWTP



Discharge: High rate land  
dispersal



Discharge: Low rate land  
treatment



Dry to low rate land treatment



Wet to high rate land dispersal

## Te Paerahi Option 3



Treatment: New combined  
WWTP



Discharge: High rate land  
dispersal



Discharge: Low rate land  
treatment



Dry to low rate land treatment



Wet to high rate land dispersal



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# Bringing things together - Objectives

- 1) Cease discharge at Te Paerahi and ideally cease treatment;
- 2) Ideally cease, or at a minimum reduce the discharge of wastewater at Porangahau to Porangahau River;
- 3) Develop a discharge system whereby the wastewater is beneficially reused;
- 4) Develop a system that utilises land application as far as practically possible;
- 5) Provide for efficiencies of managing both communities together where possible;
- 6) Recognise and provide for tangata whenua values;
- 7) Provide for a system that can be implemented over time and as finances provides for;
- 8) Provide for community growth; and
- 9) Provide a system that is environmentally and regulatory robust and enduring.



Bringing things  
together –

## The Proposal



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# Bringing things together – the Proposal

Stage 1	Stage 2	Stage 3	(Stage 4)
2 years (2020-2022)	4 years (2022-2025)	7 years (by 2027)	10 years (by 2030)
<ul style="list-style-type: none"> <li>Find and acquire land</li> <li>Consent and build irrigation site</li> <li>Build pipeline and convey wastewater to a new irrigation site.</li> <li>Build storage (large enough for both)</li> <li>Cease discharge at Te Paerahi</li> <li>Improve Porangahau WWTP (add new filter and UV)</li> </ul>	<ul style="list-style-type: none"> <li>Build pipeline from Porangahau to new land site</li> <li>Send Porangahau wastewater to new irrigation site (expand irrigation area)</li> <li>Reduce Porangahau discharge to River (only during high flows)</li> <li>Upgrade the Porangahau wetland discharge</li> </ul>	<ul style="list-style-type: none"> <li>Build new treatment plant for Te Paerahi and Porangahau at centralised site</li> <li>Develop high rate land dispersal system</li> </ul>	<ul style="list-style-type: none"> <li>Decommission existing Te Paerahi and Porangahau treatment plants</li> </ul>
Estimate: \$7.5M	Estimate: \$3.5M	Estimate: \$7.5M	



# What's holding things up

- Land
  - Where – Centralised?
  - What is available?
  - Archaeological and cultural site considerations?
- Water
  - What flow conditions
  - Need cultural support/acceptance
- Who pays for it and how
  - Where does the money come from?



# Community Affordability



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# The option (and staging) and how it is funded?

- Where does our money come from?
  - Rates – what does it mean
  - Loans
- 3 Waters Reform and Review
- Other sources of funding



# 3 Waters Reform and Review

- Background
- Progress to date
- What does it mean for us?
- Next steps



# Check In / Feedback Opportunity

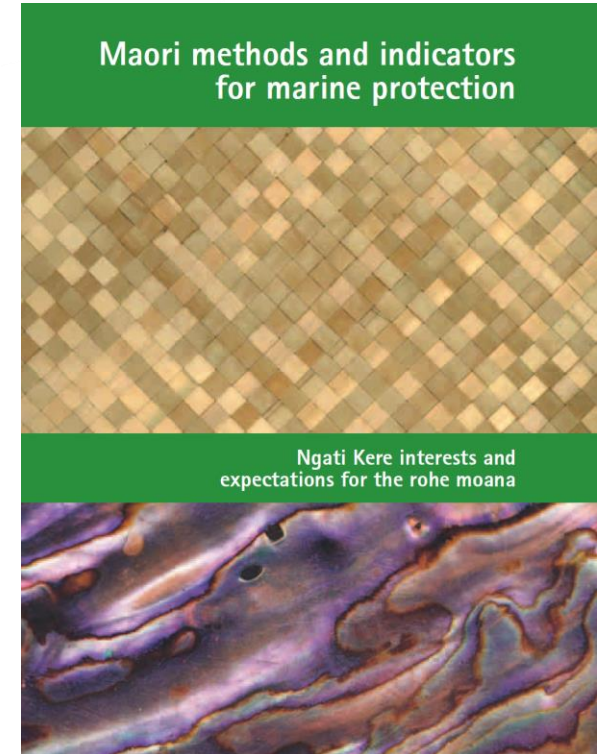


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# Your help please

- We need a CIA – but we need to have land
- We need land – but where
  - Treatment
  - Storage
  - Irrigation
  - High rate
- Are archaeological and cultural sites a limitation; or an opportunity?
- What are your concerns around impacts on Mahinga kai?
- How does the proposal impact on public health and your use of the river/area?





Legend

WWTP 10km Buffer

Wastewater Treatment Plants

Archaeological Sites

Agricultural/Pastoral

Artefact Find

Historic - Domestic

Industrial

Midden/Oven

Pa

Pit/Terrace

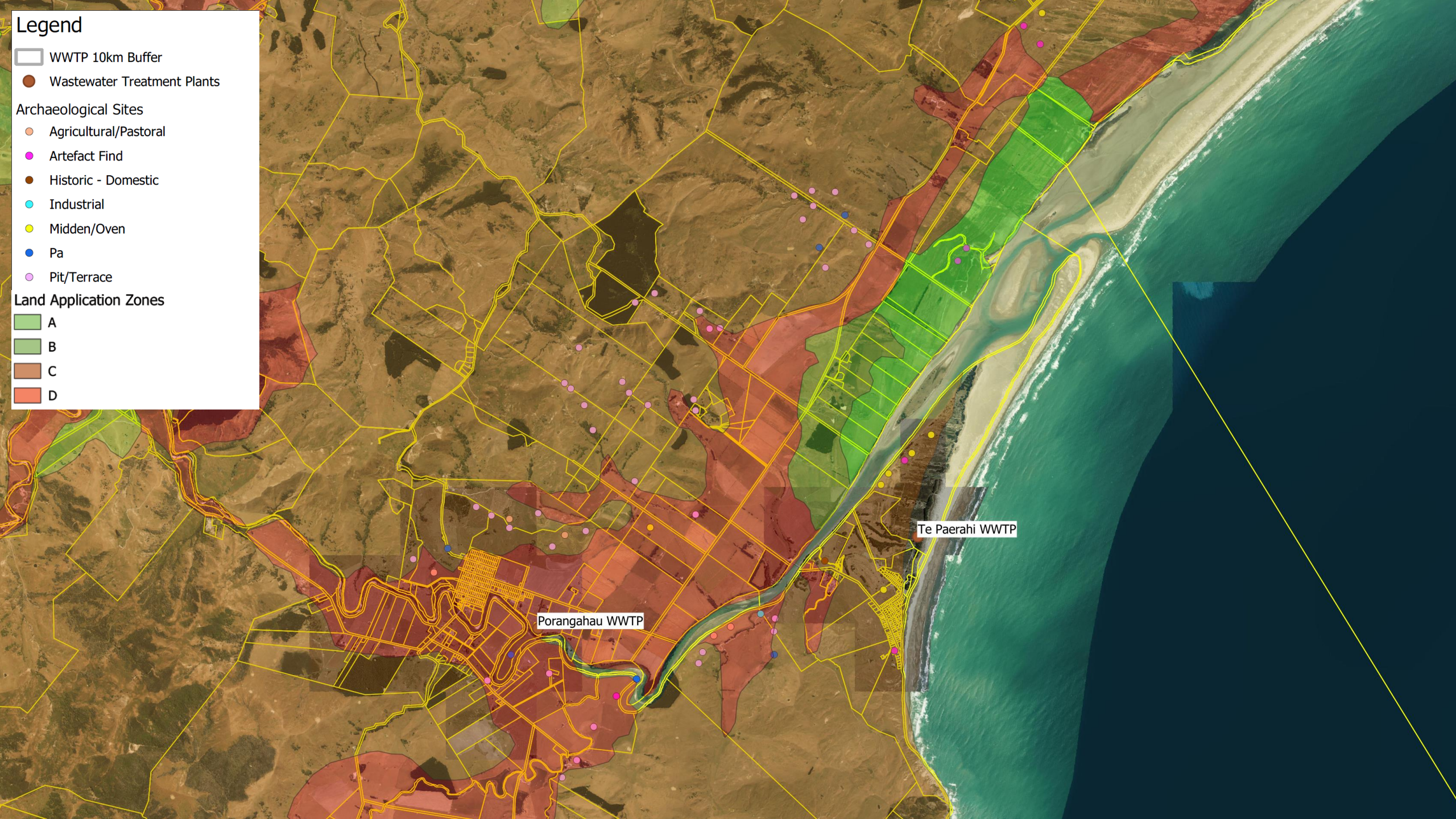
Land Application Zones

A

B

C

D







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# Engagement



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# Engagement

- Long Term Plan engagement
  - Now into August 2020
  - Formal engagement in early 2021
- We want your feedback on
  - The preferred option and staging
  - Land to use
  - Acceptability on high flow discharge to the river
  - Impacts on cultural and archaeological sites
  - Are there opportunities to incorporate Tikanga and Matauranga Maori
  - Ongoing involvement?





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# Next Steps



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## Next Steps

- CIA to get underway, and be ready to accompany December 2020 application
- December 2020 have lodged consent application with HBRC

What info and what level of communication/discussion needed moving forward?

Next “touch-point” with community



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