

FRIENDS of Banks Peninsula Inc.

Akaroa's Community Environment Society since 1990

28/10/2024

# Public Meeting

## Akaroa Wastewater Update

### Sanity NOT Sewage Overflows

Thank you for  
coming.  
Please fill in our  
attendance sheet

Grand Hotel  
27 October 2024

Hosted by: Akaroa Civic Trust  
Akaroa Ratepayers and Residents Association  
Friends of Banks Peninsula Inc  
Robinsons Bay Ratepayers and Residents Association

[www.fobp.co.nz](http://www.fobp.co.nz)



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# Topics

**Background**

**Current Council Proposal**

**Issues with the Proposal**

**We deserve better - action plan**

# Current wastewater project stage



1904



2024

Council does not yet  
have resource consent  
for its current proposal

Public hearings  
commence late  
November

Independent  
commissioners make the  
decision



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# Akaroa's current simple system

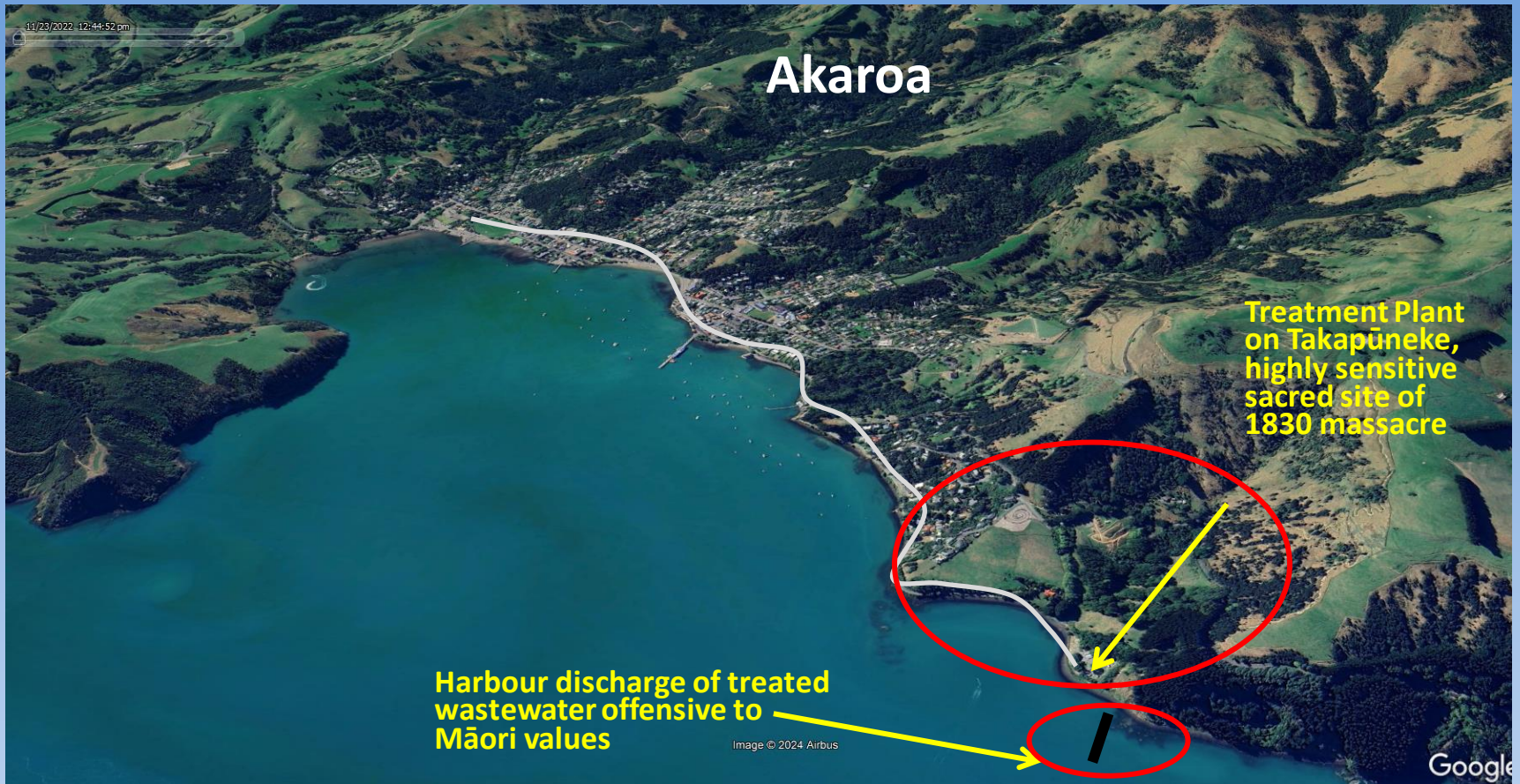




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# Ngāi Tahu cultural issues drive change



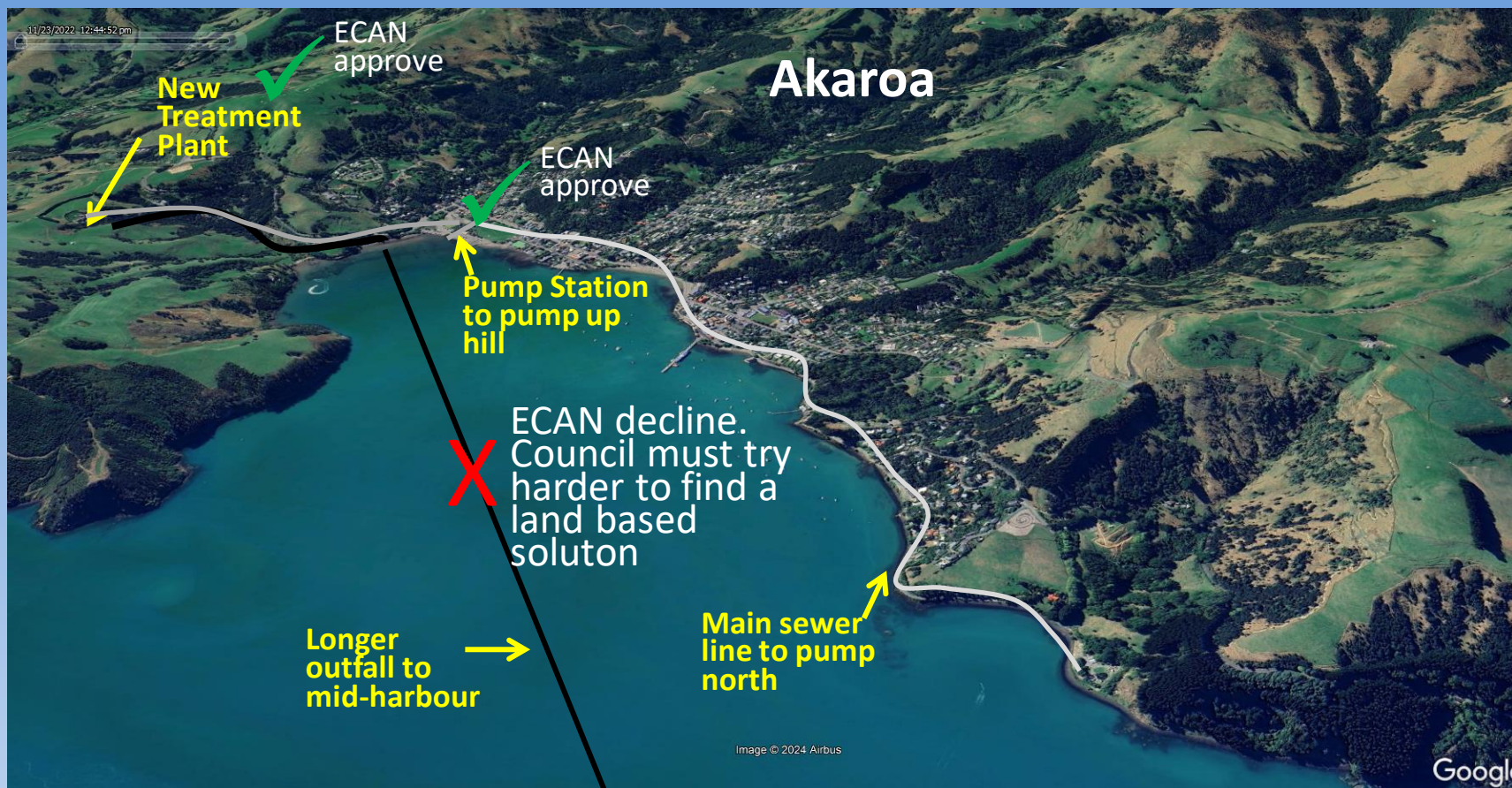
***Council searching for a solution since 2007...***



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# 2015 partial solution approved



**2015 - the search a land disposal for treated wastewater ramps up.....**



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# Land search plagued with issues



Irrigation is difficult on steep peninsula land



Robinsons Bay 2023



The loess (wind-blown silt) that blankets the Port Hills and Horomaka/Banks Peninsula is particularly susceptible to sliding..  
*ecan.govt.nz*

# 2017 - Faulty flow meter discovered

Oops –years of design work and we never checked the sewer meter was working



We've no idea how much wastewater we've got. Better install a new meter



Accurate data only available from mid-2017



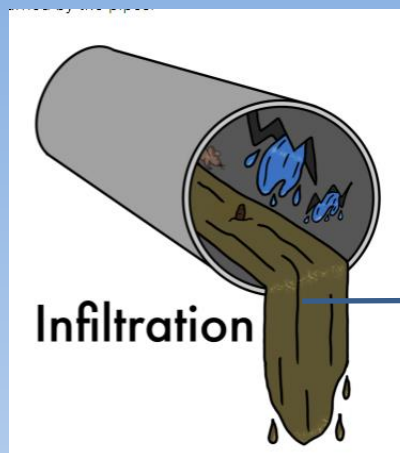
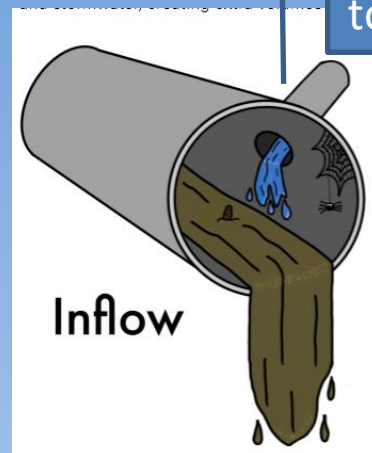


# Extent of leaking pipes revealed

We thought those Akaroa pipes were in great shape

This new data shows they leak real bad! There's loads more water than we thought and 60% is inflow and infiltration!

Stormwater pipes connected to the sewer



Groundwater getting in via cracks in pipes

***Inflow and Infiltration often referred to as I&I***

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# I&I makes land irrigation much harder

I&I  
happens  
most when  
its wet  
right?

So more  
I&I means  
more  
tanks eh?

Yeah –when its too wet  
to irrigate we store the  
wastewater in big tanks

And more of  
everything  
else.





# Rainfall determines system sizing

So when its raining there is lots more in the sewage system?



You got it. I&I creates huge spikes in wet weather

- High I&I means rainfall, not human sewage, determines system size
- Complex relationship dependent on weather patterns
- Flow metre failure means there is only data from 2017 to model system size

# Rainfall determines system sizing

So when its raining there is lots more in the sewage system?

You got it. I&I creates huge spikes in wet weather

Council has done minor work to reduce I&I but not the major work needed to fix or replace the old leaking pipe network. I&I still drives the system sizing.

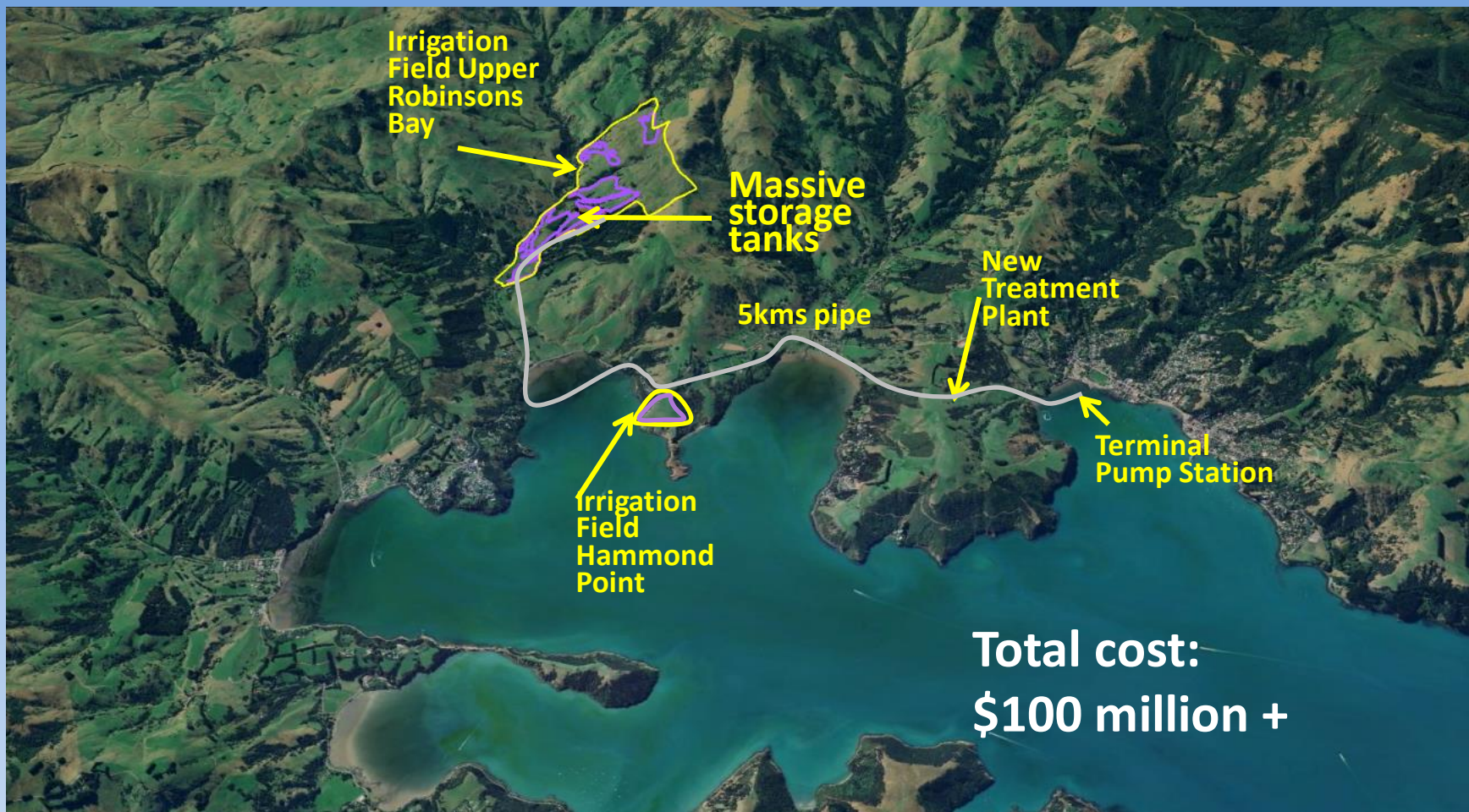
- High rainfall, not human sewage, determines system size
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# 2023 CCC lodge consent application





# System size insufficient before it starts

- We check Council wastewater sizing modelling using latest flow meter readings (includes 2 wet years 2022-23)
  - Inform Council and ECAN that system size is underestimated
- 
- Council engages BECA to review
  - BECA agree with our findings
  - Due to I&I system won't cope
  - Result is raw and treated sewage overflows in wet winters

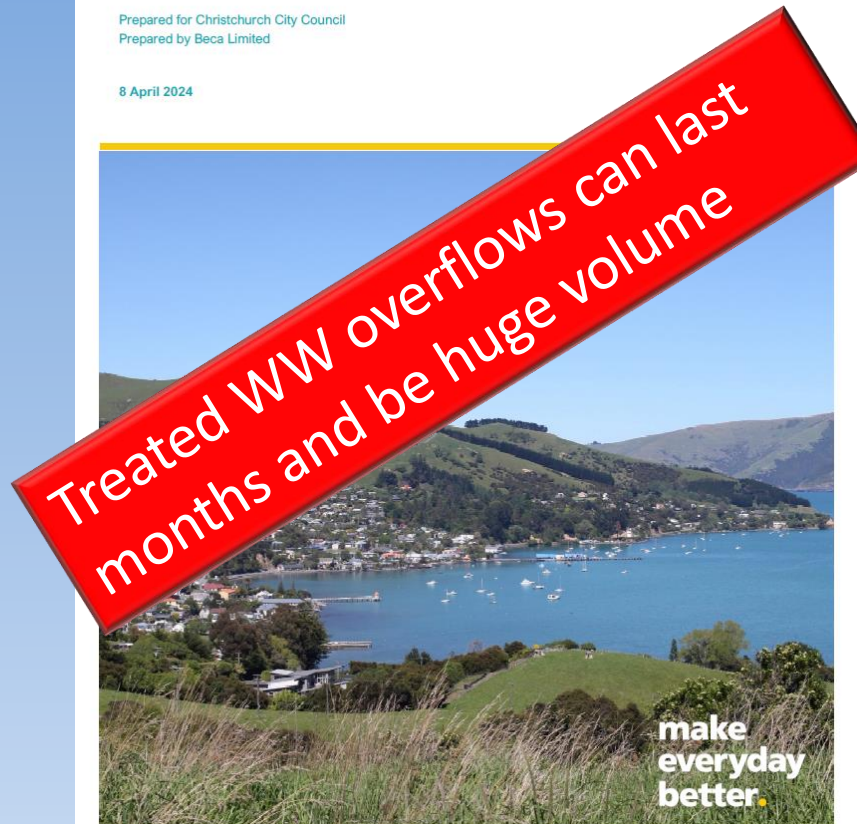


## Akaroa Wastewater Scheme

Design Flow Basis Update Report

Prepared for Christchurch City Council  
Prepared by Beca Limited

8 April 2024





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# Separate Duvauchelle proposal collapses



Golf Course at Duvauchelle

Proposal to irrigate Golf Course scrapped  
Doesn't solve the problem of winter disposal  
Too many restrictions  
All risk put on Golf Club

Council decides to close existing treatment plant  
Land instability above after July 2023 storm  
Located in coastal inundation zone



Duvauchelle Treatment Plant



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# Duvauchelle added to Akaroa Scheme



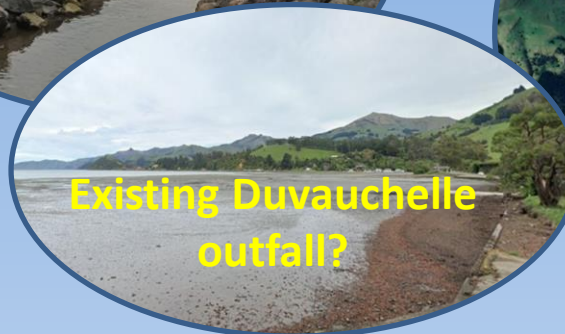
***Increases treated wastewater overflow volumes....***



# Where will treated overflows go?



- Council has given no information about how it will deal with the overflows in the application
- It has not applied for a discharge consent
- Cover email to ECAN state a harbour discharge consent will be part of Duvauchelle application



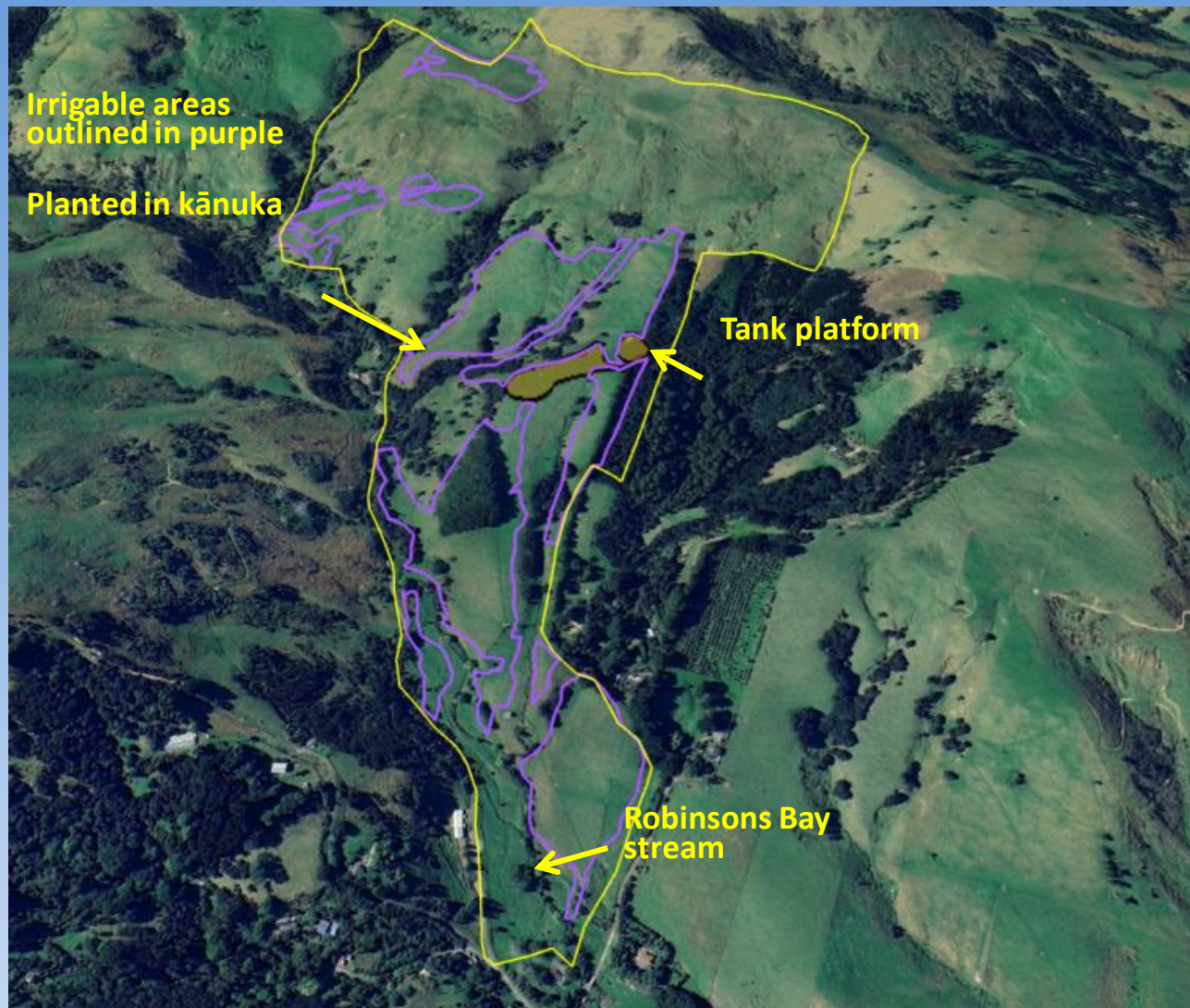
All options mean large volumes of wastewater entering the harbour  
Any discharge on or near the coast is environmentally worse than a properly designed long harbour outfall



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# Upper Robinsons irrigation field



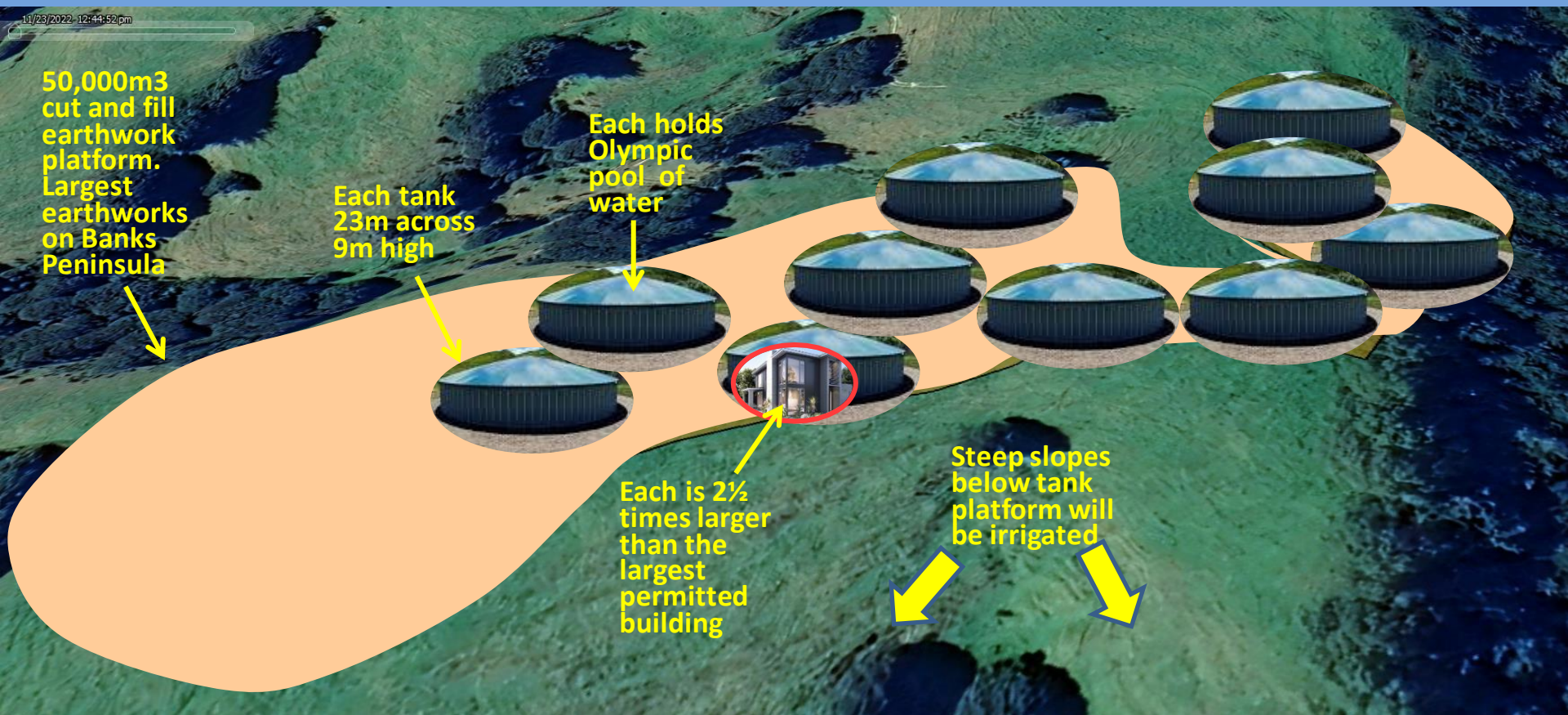
- 31.9ha on property deemed suitable for irrigation. The rest is too steep/wet/rocky
- Drip irrigated year round including during and after heavy rain to above field capacity
- Confined catchment - stream drains to shallow Robinsons Bay



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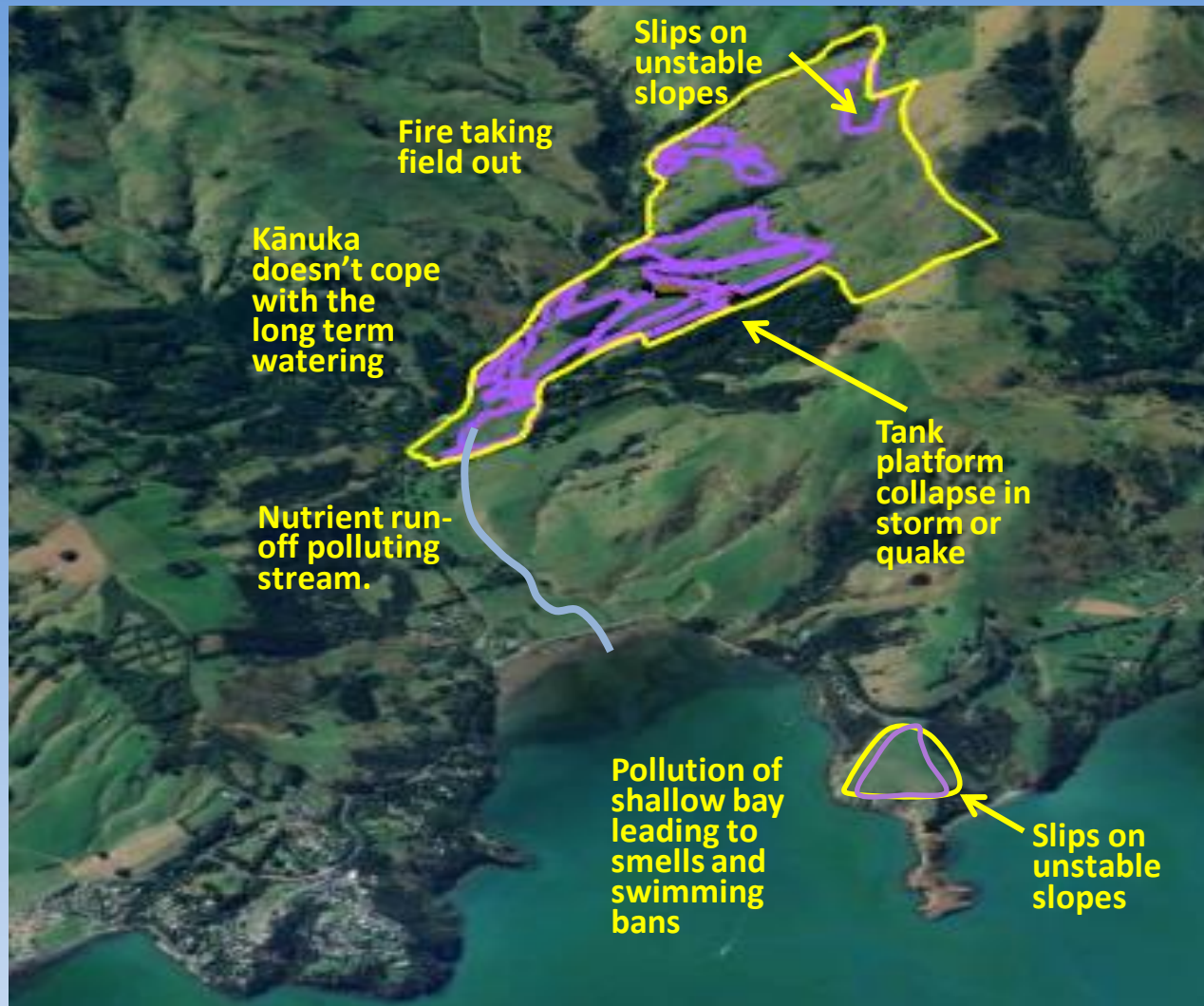
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# Size of tank farm





# Threats on irrigation fields



- Upper areas known to be wet
- Irrigation rates increased over what was previously deemed safe
- Irrigation to kānuka untried
- No headroom if it fails to perform as planned
- No Plan B if irrigation field taken out
- No capacity for growth



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# Akaroa - Terminal Pump Station

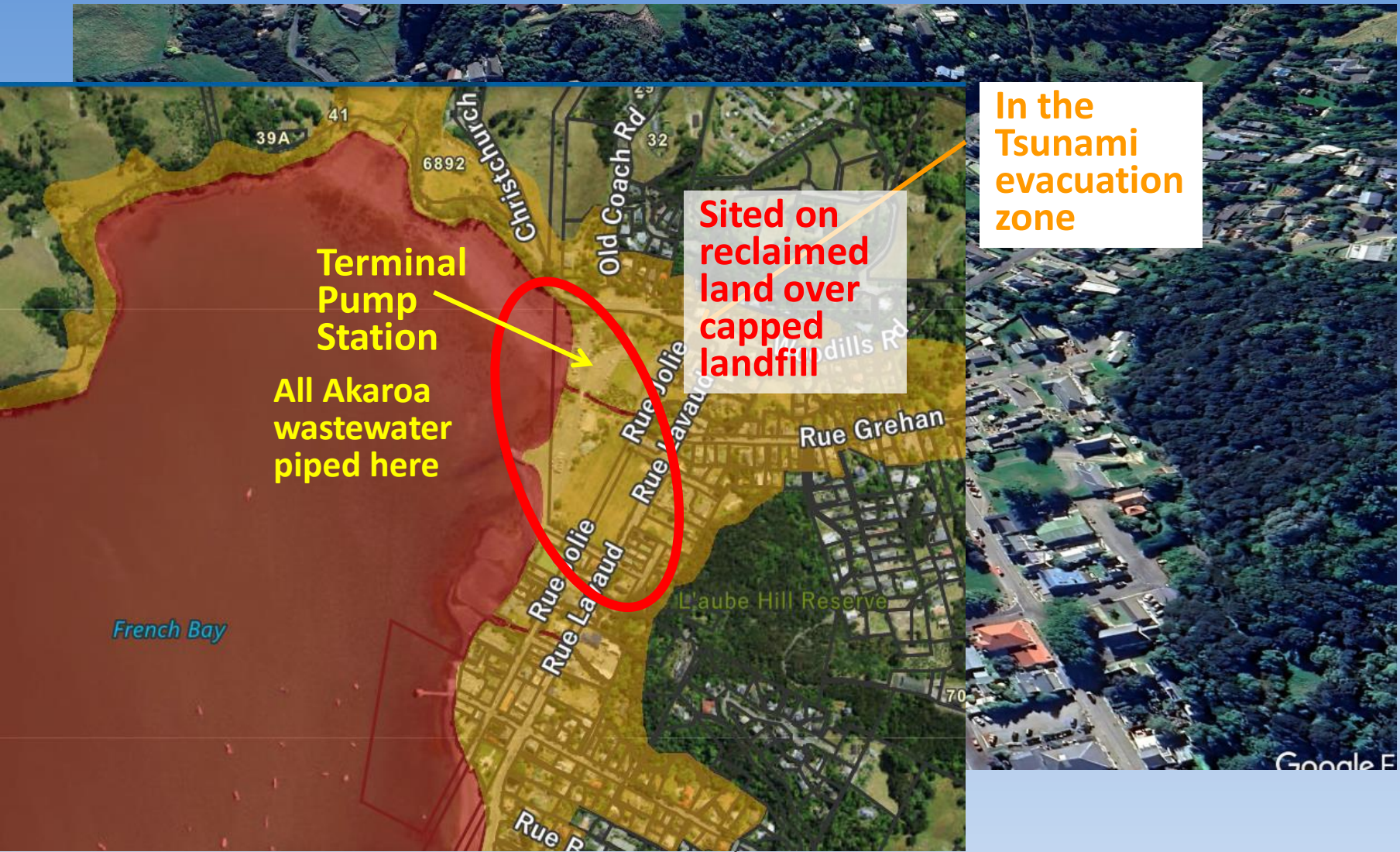




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# Vulnerable location



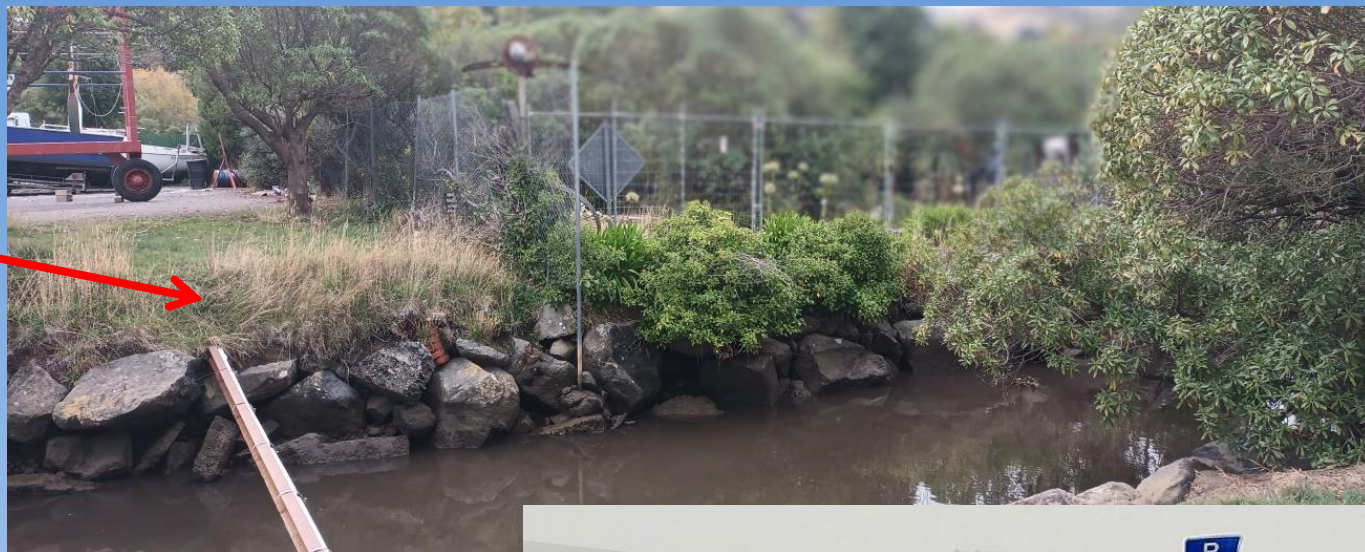


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# Raw Wastewater Overflows

Overflow from  
Terminal Pump  
Station is at  
tidal Grehan  
stream mouth



Overflow area floods  
regularly in heavy  
storms





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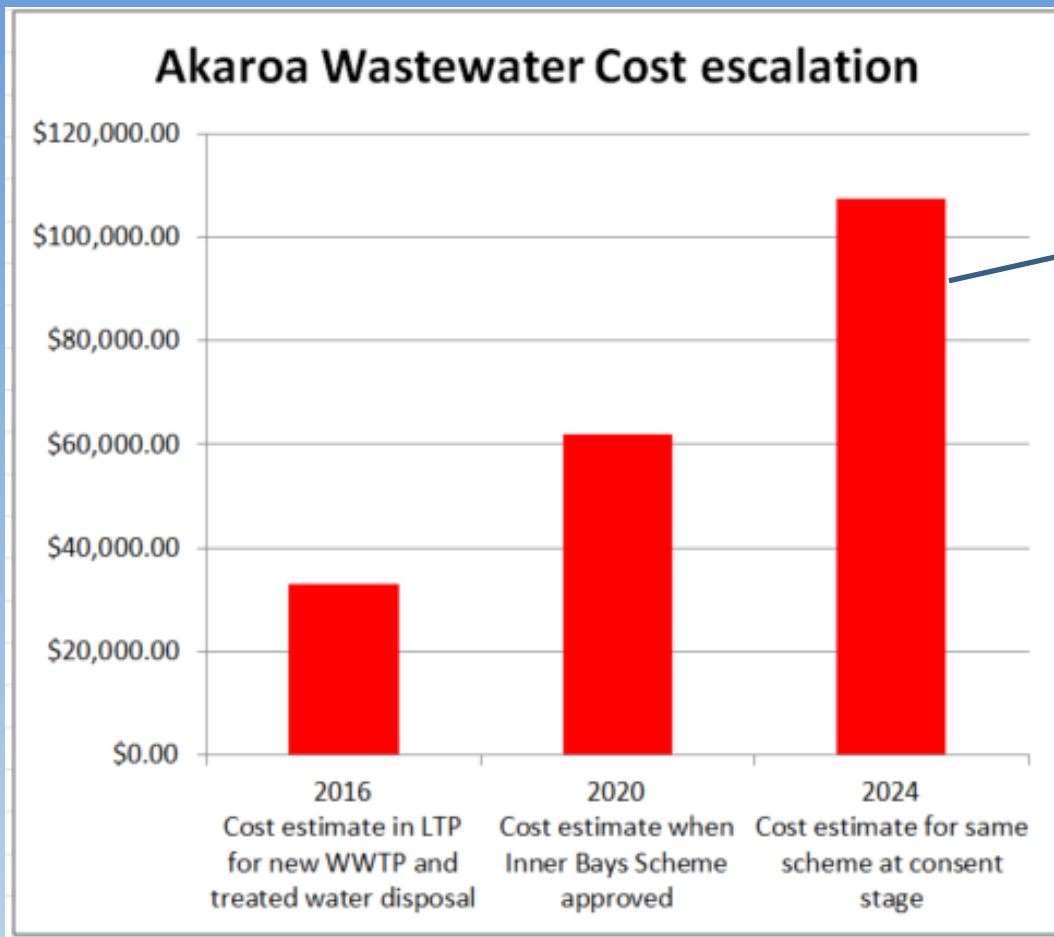
- Terminal Pump Station design target – raw overflows 1 in 5 years
- Never discussed with the public

Overflow area floods  
regularly in heavy  
storms





# Capital costs to ratepayers

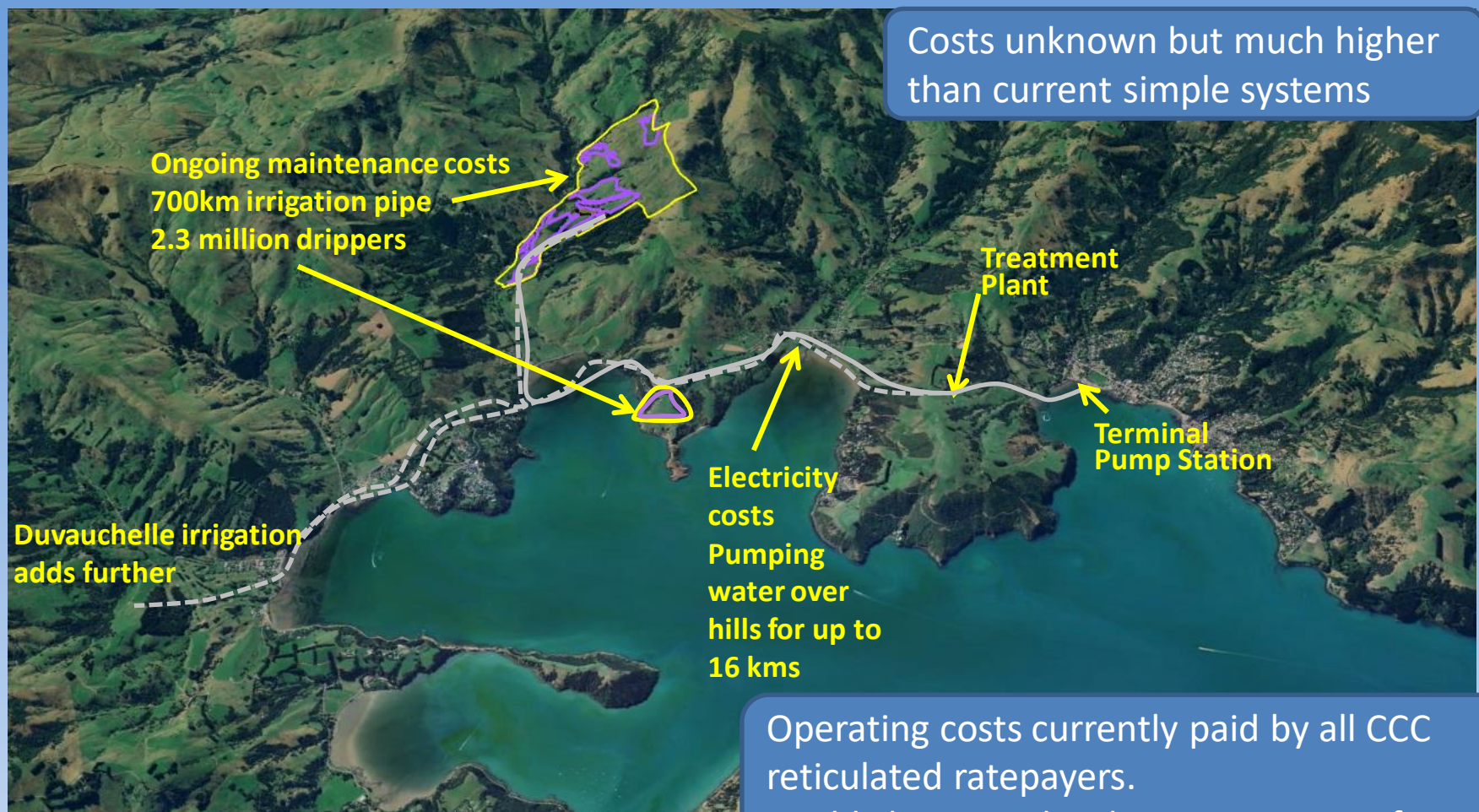


- \$107 million for approx 1000 Akaroa properties = \$107,000 per property
- Cost born by all CCC ratepayers

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# Operating Costs not disclosed





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# What a great system looks like

Best  
possible  
treatment

Minimum  
I&I

Headroom  
/capacity  
to expand

Maximum  
water re-  
use

No  
Overflows

Avoids  
pollution

Affordable  
to operate

Withstand  
climate  
change

Sustainable  
for many  
years

# What we aim to achieve

## **Aim: Get the application declined**

- Requested in our legal submission prepared by Duncan Cotterill RMA lawyers
- Council released from obligation to find a wholly land-based solution
- Enables the \$100 million to be reallocated into:
  - highest quality wastewater treatment
  - re-use in Akaroa to alleviate water shortages
  - fully fixing or replacing leaking pipes with sealed system
  - long harbour outfall to discharge small volume of water that is not re-used

## **Fallback: *If application is not declined* then stringent conditions:**

- Complete transparency on what is planned – no more legal trickery
- Reduce I&I in Akaroa and Duvauchelle
- Prevent irrigation above field capacity (when the land is too wet)
- Long outfall to discharge overflows away from coastline and shallow upper harbour



# We have a strong case

## Highly flawed proposal

- I&I still much too high
- Overflows of raw and treated sewage from the outset

## Does not achieve what it set out to

- Waste-water will still enter the harbour

## Makes Akaroa **more** vulnerable to climate change

- Terminal Pump Station on coast
- Irrigation field could be wiped in a storm
- Leaking pipes will get worse

## No Plan B

- No head-room
- No spare capacity
- No margins for extreme storms

## Relies on legal side-stepping critical information

- Downplays extent of overflows
- Wastewater Treatment method
- Harbour Discharge consent
- Duvauchelle irrigation

## Great public submissions

- Friends of Banks Peninsula legal submission
- Civic Trust
- Ratepayers
- Te Whatu Ora
- Akaroa Health Hub

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# Thank you for donations to date



Katherine Forward

Enabled engaging top RMA lawyers Duncan Cotterill

Drafted a comprehensive legally robust submission

Submission requests application is declined



Jess Ottawa



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# Experts needed at the hearings

Sorry - you locals  
can say what you  
like, but you can't  
present  
***independent  
expert evidence***

Those Council  
experts must  
know what they  
are doing

Now we've got to  
take this  
seriously. Gosh  
there are some  
major issues!

I'm a  
Resource  
Management  
lawyer

I'm an  
Environmental  
engineer

I'm a  
Geotechnical  
engineer



The Hearing Panel



Our experts

FRIENDS of Banks Peninsula Inc.

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Resource  
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Environmental  
Engineer

I'm a  
Technical  
Engineer

**Professional independent experts  
essential to counter Council experts  
who will play down all the issues**



The Hearing Panel



Our experts



# Introducing our expert engineers



Lobo Coutinho

Environmental Science

BEng (Environmental), MSc  
Hydrogeology and Environm  
Management), CPEng (Envir  
■

Specialising in

- Groundwater investigation, characterisation, modelling and assessment of impacts
- Fresh and marine water quality

Hydrologist, ground water modelling, impacts on fresh and marine water quality

Babbage Consulting engaged



Soil scientist with expertise in wastewater irrigation and irrigation management plans

Initial document review concludes:  
*“there is no backup plan for the identified risks”*

- Tunnel erosion
- Slope instability
- Underestimated peak flows
- Irrigation rates



Graham Dean

Senior Geotechnical Engineer, Christchurch

BE(Hon)

Graham  
and Se  
record

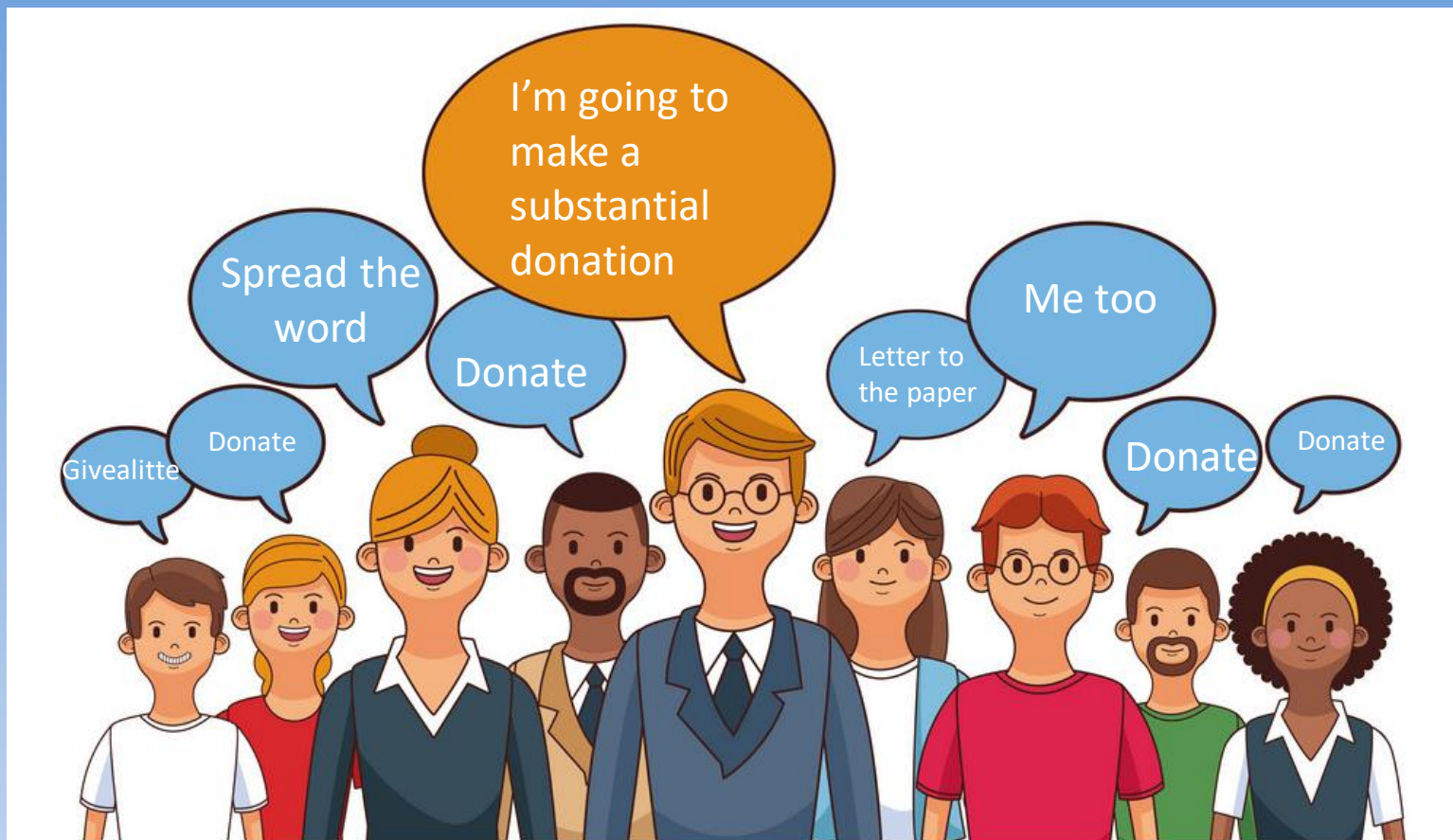
Geotechnical civil engineer

performance and managing commercial risk. He was instrumental in the foundation and sustained growth of one of the world's most successful international environmental, energy and sustainability consultancies, delivering profitable growth, product innovation and business effectiveness across UK and Global operations.

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# We need your help to afford the best





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**WE NEED more than \$30K now**

Funds needed NOW so experts can prepare  
Donations under \$500 to Givealittle please  
search "Sanity not Sewage overflows"

**Larger donations direct to  
02 0832 0034836 002**

*Friends of Banks Peninsula is a registered Incorporated Society. Financial records are available at the Incorporated Societies Register. For more information go to [friendsofbp.org.nz](http://friendsofbp.org.nz)*

**Thank  
you!**