

# 1/ What solutions do you want considered and what are your reasons for favouring this idea?

## Solutions to consider

- POMPEY'S PILLAR - first solution for withholding period or factor remuneration for loss. Water is needed in this area but withholding period needs resolution.
- Any solution that can guarantee 100% safety of water.
- Better sensitive consultation with Ngai Tahu. to explore further options (have to regain trust + develop)
- Drinking water for Akaroa.
- Mixed model - discharge to ocean  
discharge to land  
discharge to Akaroa  
recycled water - gardens, etc.
- No visual pond
- No monocrops.

## Reasoning for favouring this idea

Water is desired in this area.

More buy-in and better public acceptance

Potential to find some solution with local iwi.

### Conservation

Simple solution with multi-benefits.

Mixed model would be more beneficial as load spread with several options - land at risk to absorb the amount that would be discharged.

Doesn't change existing landscape or impact on environment.



# What Solutions do you want Considered and what are your reasons for favouring this idea?

## Solutions to consider

Discharge out to sea (not into harbour if possible)  
Absolutely the best treatment plant available.  
Combined with education / incentives for water conservation.  
In Akurea. / Avoid contaminants in sewer e.g. cleaning products.

TAX waste water as it leaves house - Free water in (nape) - ~~re~~ does encourage water management.  
Reuse the treated water in systems - use blue pipe system.

Investigate properly transporting waste to nearest point to dispose of - High capacity truck & trailer units

## Reasons for considering this idea

Most economical - would encourage the best possible treatment. (it hasn't been proved scientifically that it harms the harbour as of yet.)

- ~~re~~ does encourage water management.  
- logical - saves using new water

less expensive treatment plant required as chcl is state of art



# What solutions do you want considered and what are your reasons for favouring this idea?

## Solutions to Consider

Organica treatment plant

Community gardens

Reduce stormwater infiltration

Harbour head outfall SRM

Reed system / wetland system - small

Look at communities with similar geography & size NOT Flat land

maybe a mix of solutions. organica plant, water re-use in Akaroa, toilet flushing, car wash, garden watering.  
Local farm irrigation, Reed bed, <sup>solution</sup> small man made ponds spread out over different areas, a save water scheme an education for Akaroa. drip irrigation on stands of native forest open to public.  
Buried Sewage Pond. Not visible.

## Reasons for favouring this idea

- operating cost
- quality of water.
- build cost
- beneficial use

- reduce peak flows
- consistency in flows

Keep it out of harbour.

several systems reduce potential catastrophic failure. e.g. Tekapo.

e.g. Rotorua Lakes, Tekapo, Picton, Mangawhai.

minimise impact of one site



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Solutions to consider

Akumoa to responsibility  
for own waste water. +  
recycle for Akumoa's use.

Robinsons Bay <sup>Takamutu + other valleys</sup> to accept.  
Nature Forest <sup>+ Pomallies</sup> to include

Public Access. !!!

Not suitable for Akumoa. So  
why suitable for Robinson  
Bay.

Harbours discharge -  
Enclosed Tanks.

reasons for favoring this idea

Save water - will reduce tensions between community

Water Shortages

absolutely!



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### Solutions to consider

~~Harbour discharge to~~

A) Pompeys Pillar & OTHER FARMLAND WHERE IRRIGATION WOULD BE AN ASSET.

B) Harbour discharge (better treatment of water quality) European Standards.

C) Finding alternative to discharge into valleys draining into harbour

D) LAND IRRIGATION TO MULTIPLE SITES IN MULTIPLE BAYS INCLUDING AKABA, TAKAMATNA, ROBINSONS BAY, & OTHERS

E) SERIES OF FIRE FIGHTING POND - ALSO USED FOR IRRIGATION

### Reasons for favouring this idea

- Less residents affected
- Land owners in Takamatna Valley keep their land use the same and other bays
- THE WATER IS AN ASSET AND THE FARMERS WANT IT.
- Takamatna residents and Land owners directly affected don't want it in Valley.
- EMERGENCY DISCHARGE

- Negative impact on properties values
- Stress levels

MORE BAYS SPREADS RISK FOR WET AREAS  
WATER CAN BE USED TO CREATE FORESTS, OR FOR PASTURE  
LARGER AREAS LAWNS DURING PER AREA  $\therefore$  ALL YEAR ROUND



# What solutions do you want considered and what are your reasons for favouring this idea?

## solutions to consider

F) STABILISE CHILDRENS BAT HILL AND USE IT THERE  
CREATE A FOREST

G) TRIPLE PIPING IN AKARAA

H) COMMUNITY FACILITIES - BAT WASH  
~ TOILETS  
~ LARICATE RFE GRASS  
~ COMMUNITY GARDENING  
WATER

## I) AKARAA'S FINEST BOTTLED WATER

- under the present proposal do they intent to treat the water ie Chlorine etc
- This is due to the fact that some semi treated sewage will be put into these ponds
- Will they agitate or airate this water while in ponds
- Do they intent to use clay bunding or concrete walls for containment of ponds
- What is the Visual aspect.

## reasons for favouring This Idea

CREATES A PICTURESQUE ASSET.  
BIRD LIFE ENHANCED.  
CLOSE TO AKARAA  
LONG TERM PERSPECTIVE.  
WILL USE BASE LAND CONSISTENTLY.

INCOME ATENTIAL

UNIQUE PRODUCT

GUARANTEED HIGH LEVEL OF TREATMENT

+ we dont want a vague public consultation document - we want detailed possibilities



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### Solutions to consider

That the water comes back into Akaroa to be used for garden watering boat washes and any other use that it is suitable for.

How much will Akaroa grow? What are the projections for pop. growth? Will the currently considered option cater for growth projections?

Composting toilets in Akaroa?

Rain water collection on house by house basis to re-use for watering, washing cars, boats etc. This would reduce the load if stormwater goes in the sewage system. Akaroa's pop could keep faith by (reducing the load on the system).  
(Kanuka possibly not suitable in wet habitat)

P.T.O

### Reasons for favouring this idea



## Solutions to consider

- Reuse the water
- Harbour out-fall
- Remote location - not residential.
- Pompeys Pillar
- organics - plant.
- = several small ponds in several areas.
- = Enclosed pond.
- = Permanent native Forest.
- = Multiple sites. - more than one valley
- = Reed Beds as in Tetap.
- Water conservation
- The Pompey Pillar option will be more expensive
- then a Sashed Pipe to the ocean - will also pick up other out falls from other settlements in the Harbour.
- This pipe can also be redirected to a holding tank when the reserve is run low.
- What happens if it turns to shit! do you have a backup plan.
- combination of options



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## Gravity fed reed beds

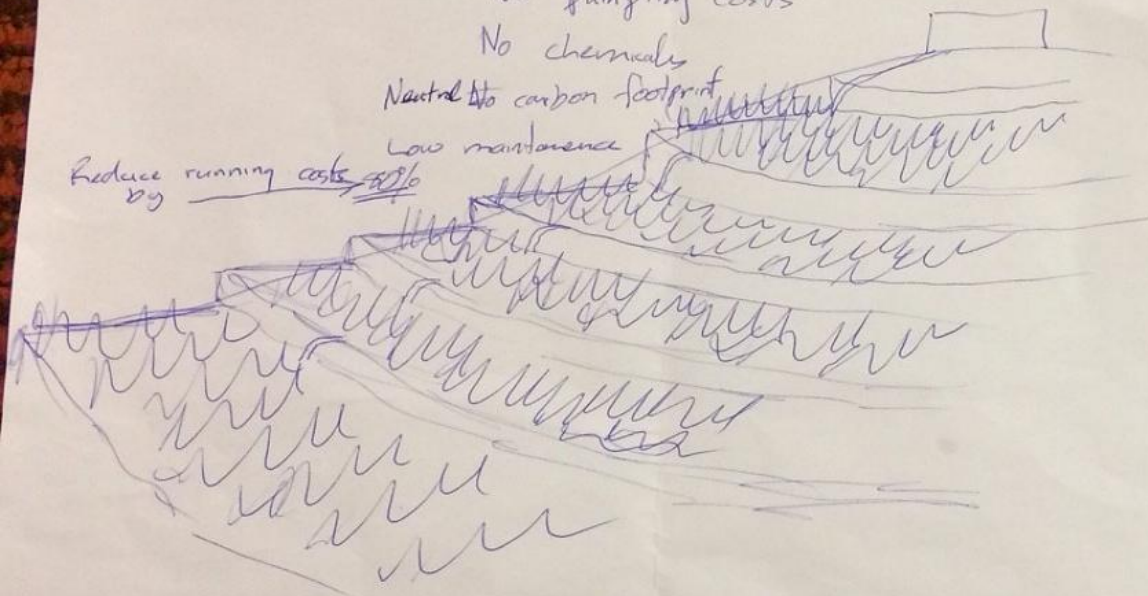
No pumping costs

No chemicals

Neutral to carbon footprint

Low maintenance

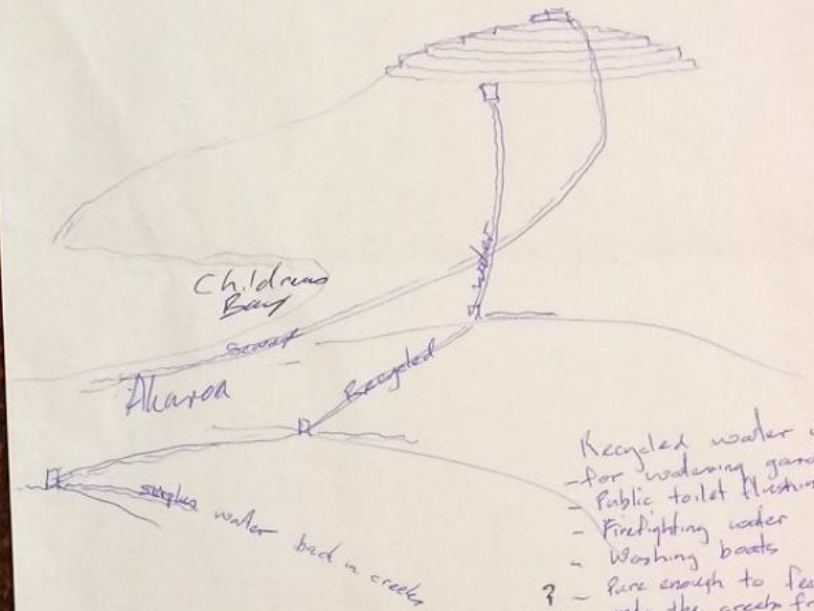
Reduce running costs by 80%



In China they use Canna lilies in with reeds  
There are summer grass feeders but die down in winter  
Lakes really beautiful and might help with summer peaks.

Gravity fed reed beds  
Reduce operating costs by 80%  
Reduce carbon emissions by 90%  
No smell No irrigation required

Two projects supported 1800 ~~people~~ <sup>Population</sup>  
9 1200 population



Recycled water used  
- for watering gardens  
- Public toilet flushing  
- Firefighting water  
- Washing boats  
? - Pure enough to feed back into the creek from where it was taken. Better for native fish life?

Consumes no energy. Requires no chemicals  
No chemical dosing - chemicals handling or storage  
Has no moving parts - minimises mechanical equipment, repairs and maintenance.  
Is carbon neutral - Low carbon footprint