

Kōrero mai | **Have your say**

Duvauchelle treated wastewater options

ccc.govt.nz/haveyoursay

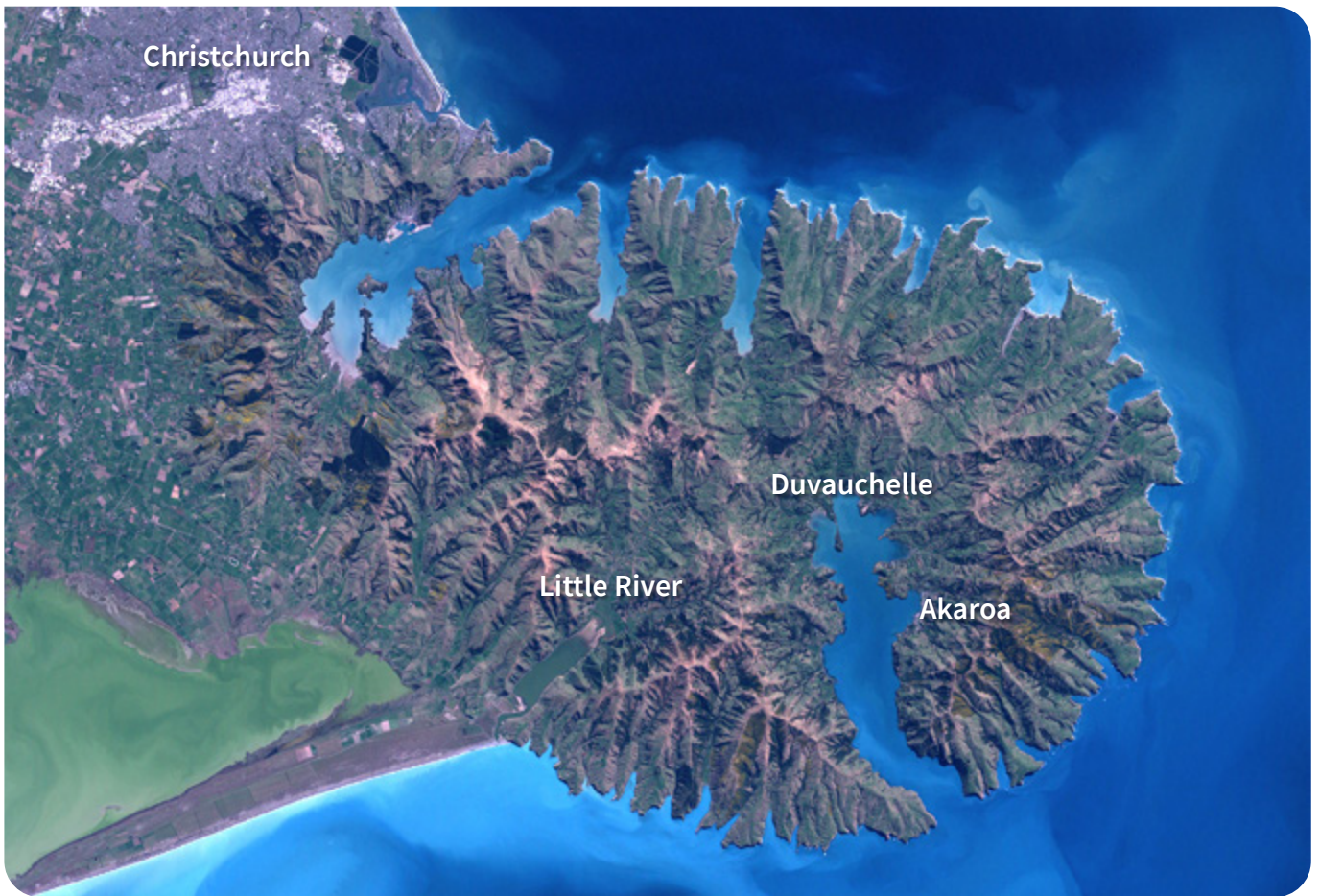
Tell us what you think by
Tuesday 7 June 2022



Introduction

We are improving the way we manage treated wastewater at Duvauchelle. Our consent to discharge treated wastewater to Akaroa Harbour is expiring and we are unlikely to get a new consent to continue sending treated wastewater into the harbour if there are viable land-based disposal alternatives.

We have budgeted \$14.4 million for this project, which will include upgrading the Duvauchelle Wastewater Treatment Plant.



It is a condition of our current consent that we investigate alternatives to discharging treated wastewater to the harbour.

Discharging treated wastewater is not culturally appropriate. It is especially offensive to Māori, who strongly oppose wastewater discharges to water.

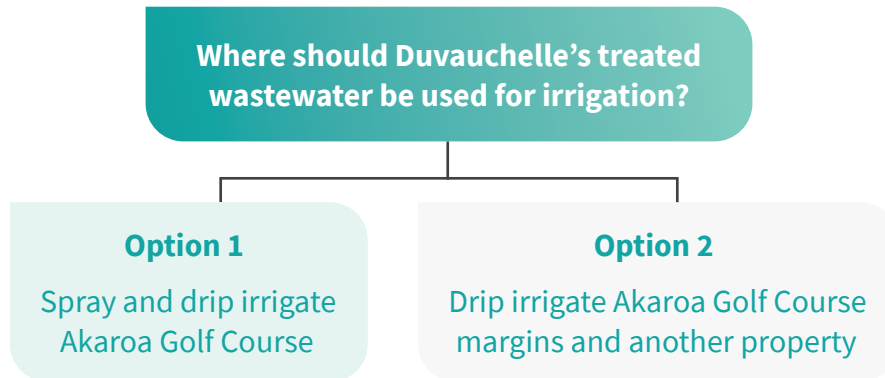
The practice is also out of step with our own strategies, including Te Wai ora o Tāne Integrated Water Strategy and the Community Waterways Partnership.

Any scheme that includes a harbour discharge is unlikely to be granted a resource consent if there are viable land-based disposal alternatives.

For these reasons we have not included an option that would involve discharging treated wastewater to Akaroa Harbour.

What we're asking

We plan to use treated wastewater from the upgraded Duvauchelle Wastewater Treatment Plant for irrigation. We'd like your feedback on where we should irrigate. There are two options to consider.



About wastewater

Wastewater, or sewage, is the used water from households, businesses and industries.

It includes everything flushed down toilets and water used for bathing and showering, laundry and dishwashing. It also includes any groundwater and stormwater that has entered the network.

Available land

The Akaroa Golf Course is the only land area big enough in Duvauchelle to receive the volume of wastewater produced. We own the land and lease it to the Akaroa Golf Club.

What we currently do

The Duvauchelle Wastewater Treatment Plant was built in 1988, with minor upgrades completed in 1996 and 2002. It serves about 250 dwellings, many of which are holiday homes.

The wastewater receives primary and secondary treatment and goes through an ultraviolet disinfection process before being discharged into Akaroa Harbour via a 1760-metre long marine outfall. Sludge is taken to the Christchurch Wastewater Treatment Plant at Bromley for processing into biosolids.



Exploring the options

Given the requirements of the Resource Management Act, our own policy frameworks, and Ngāi Tahu cultural values, it is extremely unlikely we would get a new consent to discharge wastewater to the harbour because feasible land-based alternatives exist.

In discussion with the Akaroa Golf Club, the Duvauchelle Wastewater Working Party and Ngāi Tahu we investigated 12 feasible options. We eventually settled on the two options outlined here.

Key considerations

All options considered had to meet criteria including:

Relevant law

- **Local Government Act (LGA)**
Options must take into account social, cultural, economic and environmental wellbeing.
Options must be:
 - Efficient, effective and appropriate
 - Consentable as sustainable management under the Resource Management Act
- **Resource Management Act (RMA)**
Our current consent to discharge treated wastewater to Akaroa Harbour expires in 2023.
It is a condition of that consent that we investigate alternative land-based options

Te Tiriti o Waitangi – the Treaty of Waitangi

In recognition of Crown obligations under the Treaty, we provide opportunities for iwi to contribute to and participate in our decision making.

Ngāi Tahu rights and interests associated with Akaroa Harbour are strongly focused on mahinga kai (food gathering). Discharging treated wastewater into the harbour is culturally offensive to Ngāi Tahu and incompatible with customary use of the harbour as a food basket.

As tāngata whenua, Ngāi Tahu has kaitiaki (guardianship) rights and responsibilities to actively protect natural resources of the harbour for future generations.

Ngāi Tahu told us they will not accept any option that discharges wastewater to water.

Risks

- Risks identified with the chosen option will be managed appropriately during the design and construction stages, and through the resource consenting process.

ccc.govt.nz/Duvauchelle

Te Wai ora o Tāne Integrated Water Strategy

Council adopted this strategy in September 2019. It provides a holistic approach to our management of water supply (drinking water), wastewater, stormwater, surface water and groundwater. It recognises water as a taonga (treasure) and identifies the need to manage water resources in ways that support the environmental, social, cultural and economic wellbeing of current and future generations.

Goals include to:

- Reduce the effects of wastewater overflows
- Manage wastewater systems to meet community needs
- Develop long-term solutions for the disposal of treated wastewater from the Akaroa Harbour communities
- Develop an adaptive response to the effects of climate change
- Promote water conservation

New Zealand Coastal Policy Statement 2010

This national policy guides local authorities in their management of the coastal environment.

It states that the discharge of treated wastewater to water in the coastal environment is not allowed unless:

- There has been adequate consideration of alternatives
- The decision to allow it is informed by an understanding of tangata whenua values and the effects on them
- Objectives, policies and rules in any plans that allow such a discharge were subject to early and meaningful consultation with tangata whenua

Options – the long list

These 10 options were on our long list, but were not favoured for various reasons.

Options considered and rejected (listed in no particular order)		
Option description	Capital cost	Reasons not on short-list
Redevelop golf course as 12-hole course; irrigate tees, greens and fairways; develop a new wetland	\$25 million	High cost; increased nutrient load in stream; difficult to consent; Ngāi Tahu support would depend on wetland performance; not supported by Akaroa Golf Club
Redevelop golf course as 12-hole course; irrigate tees, greens and fairways; irrigate trees on golf course margins	\$25 million	High cost; not supported by Ngāi Tahu because of one in five-years overflow to harbour; not supported by Akaroa Golf Club
Irrigate land at the head of the bay	Not costed	Culturally sensitive site (iwi); insufficient land unless combined with another site
Irrigate land on west side of Akaroa Harbour basin	Not costed	Too far from treatment plant to be cost-effective
Redevelop golf course as 12-hole course; irrigate tees, greens and fairways; irrigate trees on golf course margins; irrigate neighbouring land	\$26 million	High cost; additional land needed; not supported by Akaroa Golf Club
Irrigate trees on golf course margins, including areas uphill of the golf course; storage on golf course	\$9 million	Risk of overflow to harbour; insufficient land area
Redevelop golf course as 12-hole course; irrigate trees on golf course margins, including areas uphill of the golf course; storage on golf course	\$14 million	Not supported by Akaroa Golf Club
Disestablish golf course; irrigate trees planted on that land	\$8 million	Not supported by Ngāi Tahu or Akaroa Golf Club
Irrigate land at Robinsons Bay (separately to the Akaroa Wastewater Scheme)	\$10 million	Not supported by Duvauchelle Wastewater Working Party; likely to be strongly opposed by Robinsons Bay community; not supported by Akaroa Golf Club
Discharge to Akaroa Harbour	\$5 million	Unacceptable to Ngāi Tahu; not aligned with Council's strategic direction; difficult to consent if there are viable land-based options

Two options

That left us with a short list of two options.

Both the short-listed options use treated wastewater on the golf course land.

The first option beneficially reuses the wastewater for irrigation when needed and applies the treated wastewater to trees when not needed on the golf course.

The second option drip irrigates trees on the margins of the golf course and on another nearby property.

We are talking with a land owner who is keen to use treated wastewater to irrigate native trees on his property. However, at the time of publication an agreement had not been confirmed.



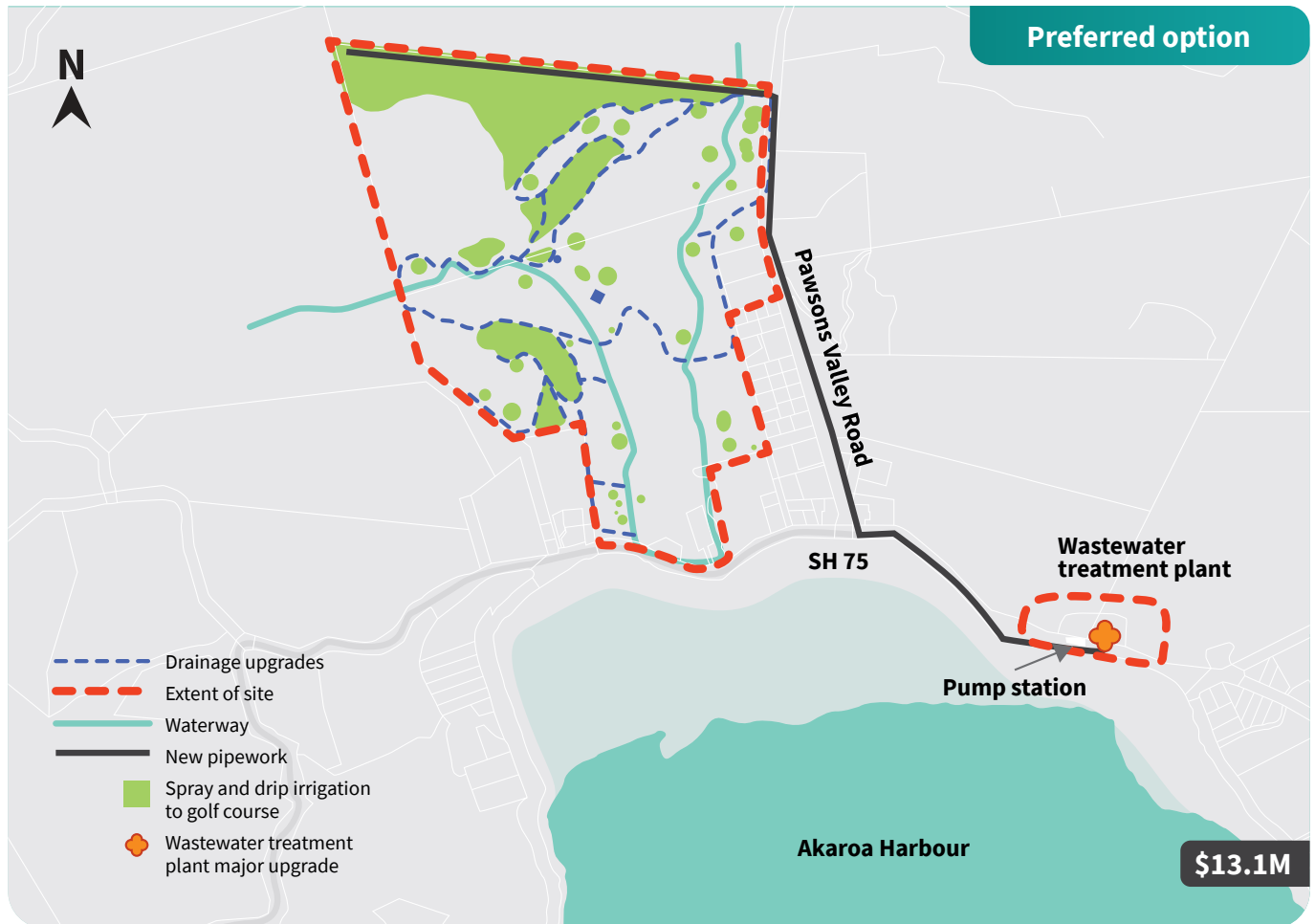
An example of spray irrigation at a golf course.



An example of drip irrigation at an orchard.

Option 1 – Spray and drip irrigate Akaroa Golf Course

Irrigate treated wastewater onto trees, greens and fairways of existing 18-hole golf course during summer.
Irrigate planted course margins, including the area uphill of the golf course, in winter.



We would use treated wastewater to irrigate the golf course.

The treated wastewater will be used to irrigate the golf course when needed.

In dry conditions (summer), it would be used to spray irrigate tees, greens and fairways.

In wet conditions (winter), it would be used to drip irrigate the planted margins around the golf course, including the area uphill of the golf course (already planted in trees).

In wet weather, when ground conditions on tees, greens and fairways are too wet for spray irrigation, the treated wastewater would be used to drip irrigate eight hectares of trees around the golf course.

Storage tanks for treated wastewater would be needed. Their total capacity would be 3,800 cubic metres.

The treatment plant would be upgraded to treat the wastewater to the standard required for spray and drip irrigation to land used for recreation.

The capital cost would be about \$13.1 million.

The estimated annual operating cost would be about \$240,000.

Our wellbeing assessment shows:



Cultural wellbeing: Ngāi Tahu supports this option because there is no discharge to the harbour.



Social wellbeing: This option provides for true beneficial reuse of highly treated wastewater in a way that supports a valued community venue for recreation.



Economic wellbeing: The capital and operational costs are higher than for Option 2 as the new wastewater plant would require significantly higher specifications to treat the wastewater to the standard needed for spray irrigation on a golf course and more irrigation and drainage work would be needed.



Environmental wellbeing: Any negative effects on the environment would be minimal, with little effect on water resources. There are carbon benefits and the need to take water from the stream to irrigate Akaroa Golf Course will significantly reduce.

Staff opinion

We prefer this option because it meets the expectations of national policies and our strategic direction. It reuses the treated wastewater at one site – the golf course.

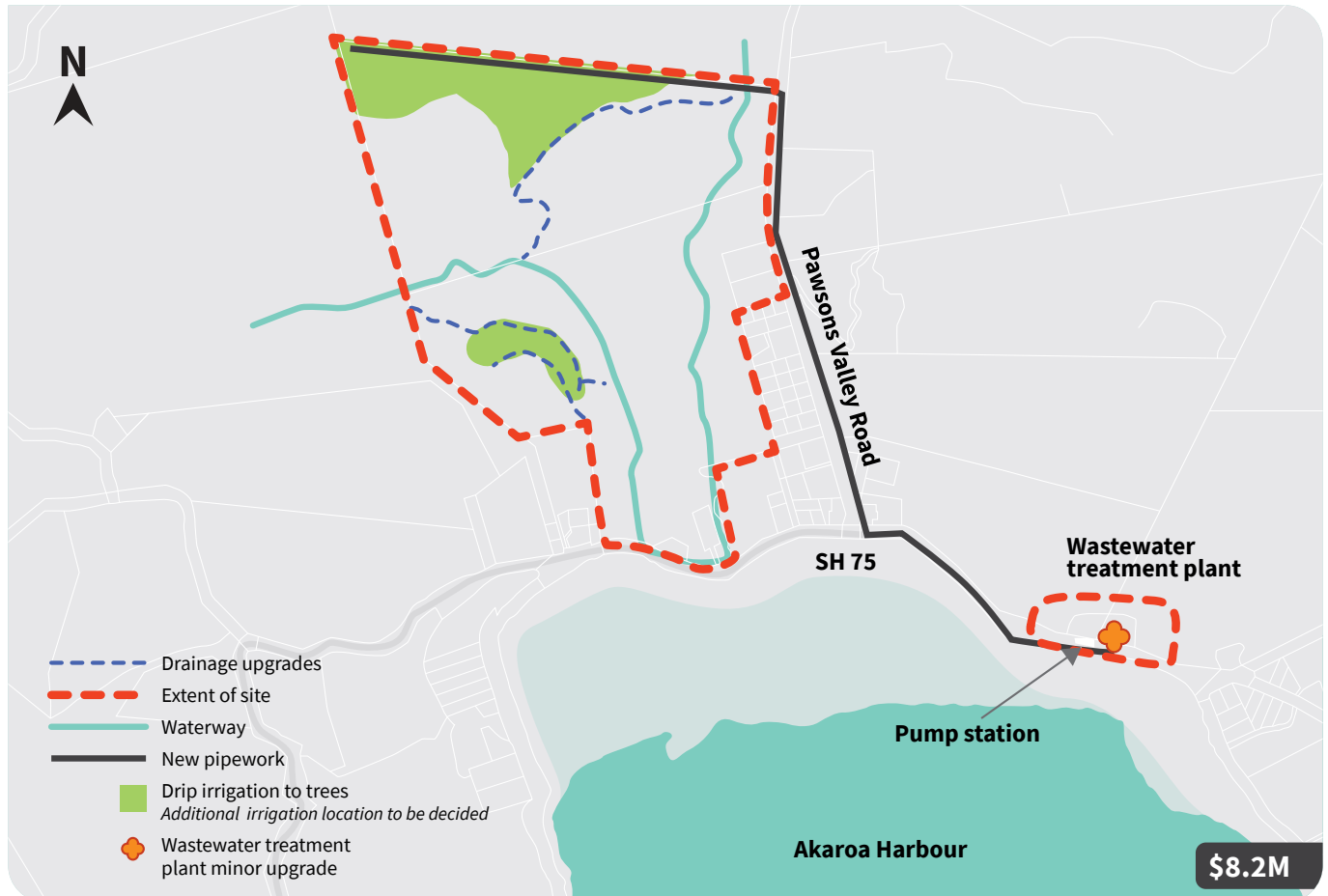
It satisfies the strong desire of Ngāi Tahu that we cease discharging treated wastewater into Akaroa Harbour.

The golf club supports this option and, from our discussions with the Duvauchelle Wastewater Working Party, it appears there is community support for using treated wastewater in this way.

Although this is the more expensive option, there are benefits in significantly reducing water use from the stream for irrigation, and in the scheme's capacity for future growth.

Option 2 – Drip irrigate Akaroa Golf Course margins and another property

Irrigate planted course margins, including areas uphill of the golf course. Retain an 18-hole course and irrigate a nearby property. The golf course playing areas would not be irrigated with treated wastewater.



We would use treated wastewater to drip irrigate the planted areas around the golf course and trees on private land nearby. The golf course playing area would not be irrigated.

The treatment plant would need only a minor upgrade for drip irrigation.

Approximately 9.4 hectares of trees would be required for this drip irrigation option.

Storage tanks with a capacity of 3,200 cubic metres would be needed.

The capital cost would be about \$8.2 million.

The estimated annual operating cost is \$200,000.

Our wellbeing assessment shows:



Cultural wellbeing:
Ngāi Tahu supports this option because there is no discharge to the harbour.



Economic wellbeing: The capital cost is lower than it is for Option 1. We would need to buy land or come to a land-lease arrangement for the wastewater to be used at the second property.



Social wellbeing:
We see no issues.



Environmental wellbeing: Any negative effects on the environment would be minimal, with little effect on water resources, although the golf club would still take water from the stream for irrigation. There are carbon benefits in planting new areas of native trees.

Staff opinion

We like this option because it has a good costs-benefits balance and offers good operational flexibility.

It meets the expectations of national policies and our strategic direction.

It satisfies the strong desire of Ngāi Tahu that we cease discharging treated wastewater into Akaroa Harbour.

We are in discussion with the owner of a nearby property who has expressed an interested in using treated wastewater to irrigate native trees.

The options at a glance

Duvauchelle Treated Wastewater Options		
	Option 1 Spray and drip irrigate Akaroa Golf Course	Option 2 Drip irrigate Akaroa Golf Course margins and another property
Irrigation area	Spray irrigate – tees, fairways, greens Drip irrigate – planted areas and margins	Drip irrigate – planted areas and margins Drip irrigate – native trees on another property
Irrigation timing	Spray irrigation – dry conditions (summer) Drip irrigation – wet conditions (winter)	Drip irrigation - all year
Estimated capital cost	\$13.1 million	\$8.2 million
Estimated annual operating cost	\$240,000	\$200,000
Climate change (over 35 years)	3,463 tonnes carbon stored	4,002 tonnes carbon stored
Allows for Duvauchelle future growth	Yes	Yes
Advantages	Favoured by Akaroa Golf Club and Ngāi Tahu; meets legal requirements; meets national strategic policies and guidance; aligns with Council policies and strategic direction; has good carbon benefits; enough land available; allows for future growth; uses all the treated wastewater at one site	Lower cost; meets legal requirements; meets national strategic policies and guidance; aligns with Council policies and strategic direction; has good carbon benefits; allows for future growth
Disadvantages	Higher cost	Need land in addition to the golf course

A note of thanks

We've been working to find a suitable and acceptable land-based alternative to a harbour discharge from the Duvauchelle Wastewater Treatment Plant for about 12 years.

The Akaroa Golf Club, Ōnuku Rūnanga and the Duvauchelle Wastewater Working Party have participated fully in our discussions. They have helped us understand their needs, concerns and aspirations as we narrowed all the feasible options down to two options that everyone – Akaroa Golf Club, Ōnuku Rūnanga, the working party and Christchurch City Council – could accept.

We think these options address most issues people have raised, and we thank everyone in Duvauchelle and surrounding areas who helped us get to this point.

Please 'have your say'. It's important to us that we understand any community preferences and concerns. Your views will help the Mayor and Councillors in making a final decision.

How to have your say

Tell us your thoughts on the Duvauchelle wastewater options by **5pm Tuesday 7 June 2022**.



Fill out our online form at **ccc.govt.nz/Duvauchelle**
This is your quickest and easiest option.



Fill out the response form in this document, fold and send to us using the included Freepost form.



Post a letter to:
Freepost 178 (no stamp required)
Attention: Hannah Ballantyne
Engagement Advisor
Duvauchelle wastewater options
Christchurch City Council
PO Box 73016
Christchurch 8154



Deliver to Te Hononga Civic Offices
at 53 Hereford Street by 5pm Tuesday
7 June 2022.

Come and talk to the team

Staff will be available to discuss the Duvauchelle wastewater options at the following drop-in sessions;

Tuesday 17 May 2022, 6 – 8pm, Akaroa Golf Club, Duvauchelle

Thursday 19 May 2022, 10am – 12pm, Akaroa Golf Club, Duvauchelle

Submissions are public information

Subject to the provisions of the Local Government Official Information and Meetings Act 1987, we will make all submissions publicly available, including all contact details you provide on your submission. If you consider there are reasons why your contact details and/or submission should be kept confidential, please contact us by phoning (03) 941 8999 or 0800 800 169.

You will need to include these details in your feedback:

- Your preferred option
- Your full name, organisation and role (if applicable)
- Postal address, email address and daytime phone number

ccc.govt.nz/haveyoursay

Name*

Address* Postcode*

Email

Phone no.

If you are responding on behalf of a recognised organisation, please provide:

Organisation's name

Your role

**required*

We require your contact details as part of your feedback – it also means we can keep you updated throughout the project.

Your feedback, name and address are given to councillors to help them make a decision.

Your responses, with names only, go online when the decision meeting agenda is available on our website.

If requested, responses, names and contact details are made available to the public, as required by the Local Government Official Information and Meetings Act 1987.

If there are good reasons why your details and/or feedback should be kept confidential, please contact our Engagement Manager on (03) 941 8999 or 0800 800 169 (Banks Peninsula).

Please fold with the reply paid portion on the outside, seal and return by 5pm Tuesday 7 June 2022

fold

staple or tape here

fold

If you wish to attach extra paper, please ensure the folded posted item is no thicker than 6mm. Alternatively, you can send your feedback in an envelope of any size and address it using "Freepost Authority No. 178"

fold

fold

FREEPOST Authority No.178



tape here

Freepost 178 (no stamp required)
Duvauchelle wastewater options
Attn: Hannah Ballantyne
Christchurch City Council
PO Box 73012
Christchurch 8154

