

Hearings Panel

Duvauchelle Treated Wastewater Options

AGENDA

Notice of Meeting:

A Hearings Panel meeting will be held on:

Date: Monday 4 July 2022
Time: 9.00am
Venue: Committee Room 2, Level 2, Civic Offices, 53 Hereford Street

Panel

Chairperson	Councillor Mike Davidson
Members	Councillor Pauline Cotter
	Banks Peninsula Community Board Chair Tori Peden

28 June 2022

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Ōtautahi-Christchurch is a city of opportunity for all

Open to new ideas, new people and new ways of doing things – a city where anything is possible

Principles

Being open, transparent and democratically accountable	Promoting equity, valuing diversity and fostering inclusion	Taking an inter-generational approach to sustainable development, prioritising the social, economic and cultural wellbeing of people and communities and the quality of the environment, now and into the future	Building on the relationship with Te Rūnanga o Ngāi Tahu and the Te Hononga-Council Papatipu Rūnanga partnership, reflecting mutual understanding and respect	Ensuring the diversity and interests of our communities across the city and the district are reflected in decision-making	Actively collaborating and co-operating with other local, regional and national organisations
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Community Outcomes

Resilient communities Strong sense of community Active participation in civic life Safe and healthy communities Celebration of our identity through arts, culture, heritage, sport and recreation Valuing the voices of all cultures and ages (including children)	Liveable city Vibrant and thriving city centre Sustainable suburban and rural centres A well connected and accessible city promoting active and public transport Sufficient supply of, and access to, a range of housing 21st century garden city we are proud to live in	Healthy environment Healthy water bodies High quality drinking water Unique landscapes and indigenous biodiversity are valued and stewardship exercised Sustainable use of resources and minimising waste	Prosperous economy Great place for people, business and investment An inclusive, equitable economy with broad-based prosperity for all A productive, adaptive and resilient economic base Modern and robust city infrastructure and community facilities
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Strategic Priorities

Enabling active and connected communities to own their future	Meeting the challenge of climate change through every means available	Ensuring a high quality drinking water supply that is safe and sustainable	Accelerating the momentum the city needs	Ensuring rates are affordable and sustainable
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Ensuring we get core business done while delivering on our Strategic Priorities and achieving our Community Outcomes

Engagement with the community and partners	Strategies, Plans and Partnerships	Long Term Plan and Annual Plan	Our service delivery approach	Monitoring and reporting on our progress
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1. Apologies Ngā Whakapāha

At the close of the agenda no apologies had been received.

2. Election of a Chairperson Te Whakatū Poumua

At the start of the meeting a Chairperson will be elected.

3. Declarations of Interest Ngā Whakapuaki Aronga

Members are reminded of the need to be vigilant and to stand aside from decision making when a conflict arises between their role as an elected representative and any private or other external interest they might have.

4. Duvauchelle treated wastewater options

Reference / Te Tohutoro: 22/795665

Report of / Te Pou Matua:	Barry Hu, Senior Project Manager, Barry.Hu@ccc.govt.nz Bridget O'Brien, Technical Principal, WSP, Bridget.Obrien@wsp.com Hannah Ballantyne, Engagement Advisor, Hannah.Ballantyne@ccc.govt.nz
General Manager / Pouwhakarae:	Jane Davis, GM Planning and Regulatory Services, Jane.Davis@ccc.govt.nz

1. Purpose of the Report Te Pūtake Pūrongo

- 1.1 The purpose of this report is to provide the Hearings Panel with information on community views on the options for Duvauchelle's wastewater following public consultation.
- 1.2 The decisions in this report are of high significance in relation to the Christchurch City Council's Significance and Engagement Policy. The level of significance was determined by the high level of community interest and involvement in this project, the high level of impact on Māori culture and traditions, and the significant financial cost.

2. Proposed Officer Recommendations Ngā Tūtohu

- 2.1 That the Hearings Panel recommends that the Council:
 - 2.1.1 Receives the information within this report and considers the written and oral submissions made as part of the public consultation process.
 - 2.1.2 Approves the adoption of Option 1: spray and drip irrigate treated wastewater to the Akaroa Golf Course.

3. Reason for Report Recommendations Ngā Take mō te Whakatau

- 3.1 Neither option involves treated wastewater discharge to Akaroa Harbour. Once this project and the Akaroa reclaimed water reuse project are complete, this will mean that there are no treated wastewater discharges to Akaroa Harbour, which has long been the strong desire of Ngāi Tahu and is consistent with the Council's Te Wai Ora o Tāne Integrated Water Strategy.
- 3.2 Option 1 is preferred by Ōnuku Rūnanga, the Duvauchelle wastewater working party and the Akaroa Golf Club. It was also the preference of 90 per cent of submitters. It beneficially uses the treated wastewater to enhance a community facility and is within the project budget in the Long Term Plan.
- 3.3 While Option 2 is lower cost than Option 1, it was not preferred by any key stakeholders and was only preferred by 6 per cent of submitters. While discussions have started with the owner of the additional land which would be needed, no formal agreement has been reached.

4. Background Te Horopaki

- 4.1 The Council needs a new resource consent for the discharge of treated wastewater from the Duvauchelle wastewater treatment plant. Alternatives have been identified to the current practice of discharging treated wastewater into Akaroa Harbour.

- 4.2 The Duvauchelle wastewater treatment plant was built in 1988, with minor upgrades completed in 1996 and 2002. It serves a community of about 250 dwellings, many of which are holiday homes.
- 4.3 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 for processing into bio-solids.
- 4.4 The resource consent for the discharge of treated wastewater to the harbour was granted in 2011 and expires in January 2023. As required by the consent, a community working party was set up and land-based alternatives to the harbour outfall have been thoroughly explored.
- 4.5 The Three Waters Infrastructure and Environment Committee decided on 6 April 2022 to consult on two options, both of which include the Akaroa Golf Course:
 - 4.5.1 **Option 1:** 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.
 - 4.5.2 **Option 2:** Irrigate planted course margins, including areas uphill of the golf course. Retain an 18-hole course and irrigate trees on a nearby property. The golf course playing areas would not be irrigated with treated wastewater.
- 4.6 For further information about the options, please refer to the consultation document (Attachment A) and the Beca technical report [Duvauchelle Wastewater Summary of Disposal and Reuse Options 2022](#)¹ and its [appendices](#)².

5. Community Views and Preferences Ngā mariu ā-Hāpori

Public Consultation Te Tukanga Kōrerorero

- 5.1 Engagement with the Duvauchelle wastewater working party has occurred over the last 11 years. As required by the consent, members of the working party included representatives from Ōnuku Rūnanga, Wairewa Rūnanga, Taiāpure Management Group, Akaroa Harbour Marine Protection Society, Friends of Banks Peninsula, Environment Canterbury, Department of Conservation and other interested groups such as the Akaroa Golf Club. Engagement with the working party has been a very useful process and resulted in two land-based options being shortlisted and approved by the Three Waters Infrastructure and Environment Committee for consultation.
- 5.2 Consultation started on 6 May and ran until 7 June 2022. An email was sent to 21 recognised stakeholders. Absentee owners (living outside of Christchurch City Council boundaries) were sent consultation documents. A [Newsline story](#) advertising the consultation was written on 9 May, and this was shared to the Council Facebook page. Invitations to submit via the [Have Your Say page](#) were posted to local Facebook Community Groups.
- 5.3 Consultation documents were delivered to Akaroa Service Centre, Little River Service Centre and the Duvauchelle General Store on 6 May 2022.

¹ Duvauchelle Wastewater Summary of Disposal and Reuse Options 2022 (Beca, 2022)
<https://ccc.govt.nz/assets/Documents/Consultation/2022/05-May/Duvauchelle-technical-report.pdf>

² Appendices to Duvauchelle Wastewater Summary of Disposal and Reuse Options 2022 (Beca, 2022)
https://drive.google.com/drive/folders/1lo7Z_WaKu_H2AsLFSE7as34q3WBPYp7d

- 5.4 Drop-in sessions were held at the Akaroa Golf Club on Tuesday 17 May (6-8pm) and Thursday 19 May (10am-12pm) and attended by approximately 15 people.

Summary of Submissions Ngā Tāpaetanga

- 5.5 126 submissions were received from five organisations, three businesses, two government agencies, one Community Board and 115 individual residents. All submissions are provided in the Hearings Panel Agenda.
- 5.6 114 submitters (90%) were in favour of Option 1 (spray and drip irrigation of Akaroa Golf Course), eight (6%) were in favour of Option 2 (drip irrigation of Akaroa Golf Course and another property), two (2%) actively opposed both options, and two (2%) did not state.
- 5.7 The majority of submitters prefer Option 1 for the following reasons:
- 5.7.1 Higher treatment level
 - 5.7.2 Support of Akaroa Golf Course (in turn helping the Duvauchelle community)
 - 5.7.3 True beneficial reuse that recycles water rather than taking it from the stream
 - 5.7.4 Superior upgrade of the wastewater treatment plant.
- 5.8 Those in favour of Option 2 mostly discussed the lower cost compared with Option 2.
- 5.9 A full analysis of submissions is available in Attachment B.

6. Policy Framework Implications Ngā Hiraunga ā- Kaupapa here

Strategic Alignment Te Rautaki Tīaroaro

- 6.1 This report the [Council's Long Term Plan \(2021 - 2031\)](#):
- 6.1.1 Activity: Wastewater Collection, Treatment and Disposal
 - 6.1.2 Community Outcomes:
 - Sustainable use of resources and minimising waste
 - Healthy water bodies
 - Modern and robust city infrastructure and community facilities
 - Safe and healthy communities
 - Sustainable suburban and rural centres
 - Strong sense of community
 - Celebration of our identity through arts, culture, heritage, sport and recreation

Policy Consistency Te Whai Kaupapa here

- 6.2 The decision is consistent with Council's Plans and Policies, in particular Te Wai Ora o Tāne Integrated Water Strategy:
- 6.2.1 Goal 2: Water quality and ecosystems are protected and enhanced
 - 6.2.2 Goal 4: Water is managed in a sustainable and integrated way in line with the principle of kaitiakitanga
 - 6.2.3 Objective 2: Efficient and resilient infrastructure
 - 6.2.4 Objective 3: Enhancement of ecological, cultural and natural values
 - 6.2.5 Objective 8: Sustainable wastewater systems.

Impact on Mana Whenua Ngā Whai Take Mana Whenua

- 6.3 The decision does involve a significant decision in relation to ancestral land or a body of water or other elements of intrinsic value, therefore this decision does specifically impact Mana Whenua, their culture and traditions.
- 6.4 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 has advised they will not accept any option that discharges wastewater to water.
- 6.5 Ōnuku Rūnanga advised in a letter to Council on 5 April 2022 that they agreed with the two options being included for consultation, as both would remove the current discharge from the harbour. Their preference was for Option 1, as it would beneficially reuse the treated wastewater in Duvauchelle, particularly as this would reduce water taken from the stream at times of the year when flows are lowest.

Climate Change Impact Considerations Ngā Whai Whakaaro mā te Āhuarangi

- 6.6 A carbon assessment was completed for both options and found that both would result in a net storage of carbon over a 35 year period. Option 2 would store slightly more carbon (4,002 tonnes) compared with Option 1 (3,463 tonnes) due to the additional tree planting.
- 6.7 The Duvauchelle wastewater treatment plant area, as with most of the Akaroa Harbour, is exposed to erosion and tsunami hazards, and the treatment plant and site access from SH75 is very close to sea level. The Duvauchelle wastewater treatment plant site is very close to the coastal erosion hazard zone and coastal inundation hazard zone areas for 2065 onwards (see the Coastal Hazard Maps <https://ccc.govt.nz/environment/land/coast/coastalhazards/>). This is an issue for both options and resilience to sea level rise, tsunami and coastal inundation will need to be considered during the design process.

7. Resource Implications Ngā Hīraunga Rauemi

Capex/Opex / Ngā Utu Whakahaere

- 7.1 Cost to Implement - \$13.1 million
- 7.2 Maintenance/Ongoing costs - \$240,000. This does not include additional costs (labour and equipment) associated with greater mowing requirements from increased grass growth. The Akaroa Golf Club has requested in its submission that the Council funds this additional cost (Submission #46914).
- 7.3 Funding Source - WW Duvauchelle Treatment and Disposal Renewal (ID 2214), budget \$13.308 million.

8. Details Te Whakamahuki

Decision Making Authority Te Mana Whakatau

- 8.1 The decision-making authority for decisions in relation to wastewater projects sits with the Three Waters Infrastructure and Environment Committee. As the Three Waters Infrastructure and Environment Committee is not meeting in August, the decision on this scheme will be made by Council. It is the role of the Hearings Panel to consider and hear submissions and information provided by Council Officers, deliberate on those matters raised, and make recommendations to the Council as the final decision-maker.

Legal Implications Ngā Hīraunga ā-Ture

8.2 Both options meet the requirements of relevant law:

8.2.1 Local Government Act (LGA): Options must take into account social, cultural, economic and environmental wellbeing. Options must be efficient, effective, appropriate, and consentable as sustainable management under the Resource Management Act.

8.2.2 Resource Management Act (RMA): The Council's current consent to discharge treated wastewater to Akaroa Harbour expires in January 2023. It is a condition of that consent that the Council investigates alternative land-based options to the harbour discharge. Both options are consentable under the RMA.

8.3 Te Tiriti o Waitangi – the Treaty of Waitangi. In recognition of Crown obligations under the Treaty, the Council has provided opportunities for iwi to contribute to and participate in our decision making.

Risks Ngā Tūraru

8.4 The key risks identified in the technical report are shown in the table below.



Key Risk	Risk Mitigation
Potential for cultural impacts	The design and layout of any land-based infrastructure should be cognisant of silent files and features that are culturally significant. A cultural impact assessment may assist in acknowledging and managing cultural concerns.
Scheme affordability	Well-developed capital and operational cost estimates to be prepared by qualified quantity surveyor as the design progresses.
Climate change, resilience to natural hazards, sustainability	Incorporate allowances for climate change into the design including sea level rise and tsunami risks. Resilience of land irrigation options is linked to design, management and maintenance of storage and irrigation infrastructure. Update greenhouse gas emissions calculations during design process.
Project governance risks	Long timeframe for scheme genesis poses risks around loss of important background and development context within governance group when final scheme selection decisions are made. Mitigation involves effective briefing by Council officers.
Programme	Failure to meet existing consent expiry date due to programme slippage or failure to consent. Timely and efficient delivery of design required. Overall project programme (high level) developed to show all stages. Short term consent being sought from Environment Canterbury for the transitional period of current scheme operation while the new scheme is built.
Wastewater irrigation to land – irrigation performance	Adoption of suitable irrigation criteria and golf course development with engagement of specialist golf course designers, agronomist, and turf design specialists. Physical testing of soil infiltration characteristics has been undertaken.
Wastewater irrigation to	Wastewater storage pond and tank concepts to be developed taking into account break risk and consequences. Risks around building

land – storage risks	storage facilities in loess will require careful consideration and peer review in detailed design.
Wastewater irrigation to land - impacts on surrounding area	Treatment of wastewater to very high standard. Beneficial reuse of wastewater in golf course irrigation and supporting tree growth. Adoption of boundary setback criteria for storage and irrigation area to avoid impacts on surrounding properties, public roads, ephemeral and permanent waterways, the coastline, and other sensitive features, or specific mitigation design. Divergence from the general criteria requires specialist assessment and evaluation.
Social impacts	Strong community engagement via wastewater working party and other forums to raise awareness and provide for well-informed position and feedback from community on respective options. Using feedback received from the community to modify and refine the scheme options to mitigate concerns and potential impacts.
Wastewater quality poses risks to receiving environment	Treatment of wastewater to a very high standard using ultrafiltration membranes and UV disinfection for irrigation of all flows including wet weather events, with a bypass for emergencies (>47 year modelled event) to be incorporated.
Consenting risks	Selection of preferred wastewater scheme through well-structured and transparent process with strong community engagement. Incorporation of regional and district planning requirements from early stages. Thorough investigation and assessment of potential environmental effects and documentation within Assessment of Environmental Effects to accompany application for consents for selected scheme.

Next Steps Ngā Mahinga ā-muri

- 8.5 Following the Hearings Panel's consideration of this report and submissions received, the Hearings Panel may seek further information of the project team if it considers it necessary, and then reports to Council for a decision on its recommended option.
- 8.6 Once the Council has made a decision, staff will proceed with the consenting, design and delivery of the chosen option.

Attachments Ngā Tāpirihanga

No.	Title	Page
A 	Duvauchelle treated wastewater options - public consultation document	12
B 	Duvauchelle treated wastewater options - submission analysis	24

Confirmation of Statutory Compliance / Te Whakatūtutanga ā-Ture

<p>Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).</p> <p>(a) This report contains:</p> <p>(i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and</p>

- (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.
- (b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

Signatories / Ngā Kaiwaitohu

Authors	Barry Hu - Senior Project Manager Hannah Ballantyne - Engagement Advisor
Approved By	Tallat Mehmood - Team Leader/Programme Manager Wastewater Helen Beaumont - Head of Three Waters Jane Davis - General Manager Infrastructure, Planning & Regulatory Services

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.

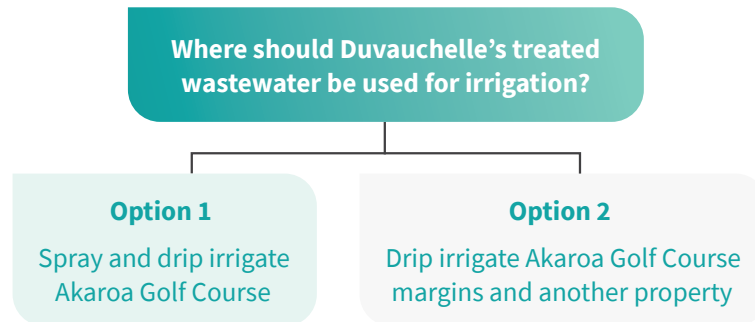
Any scheme that includes a harbour discharge is unlikely to be granted a resource consent if there are viable land-based disposal alternatives.

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

¹ Duvauchelle treated wastewater options | Have your say

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.



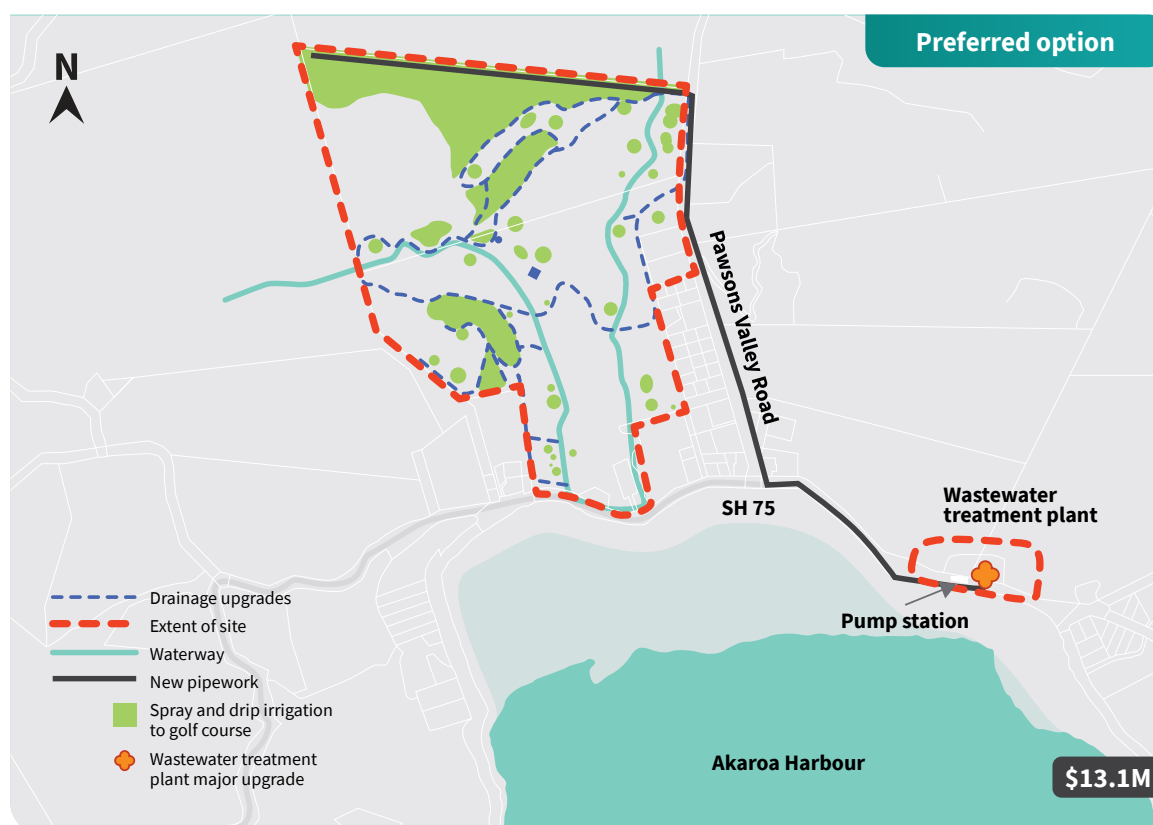
An example of spray irrigation at a golf course.



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.

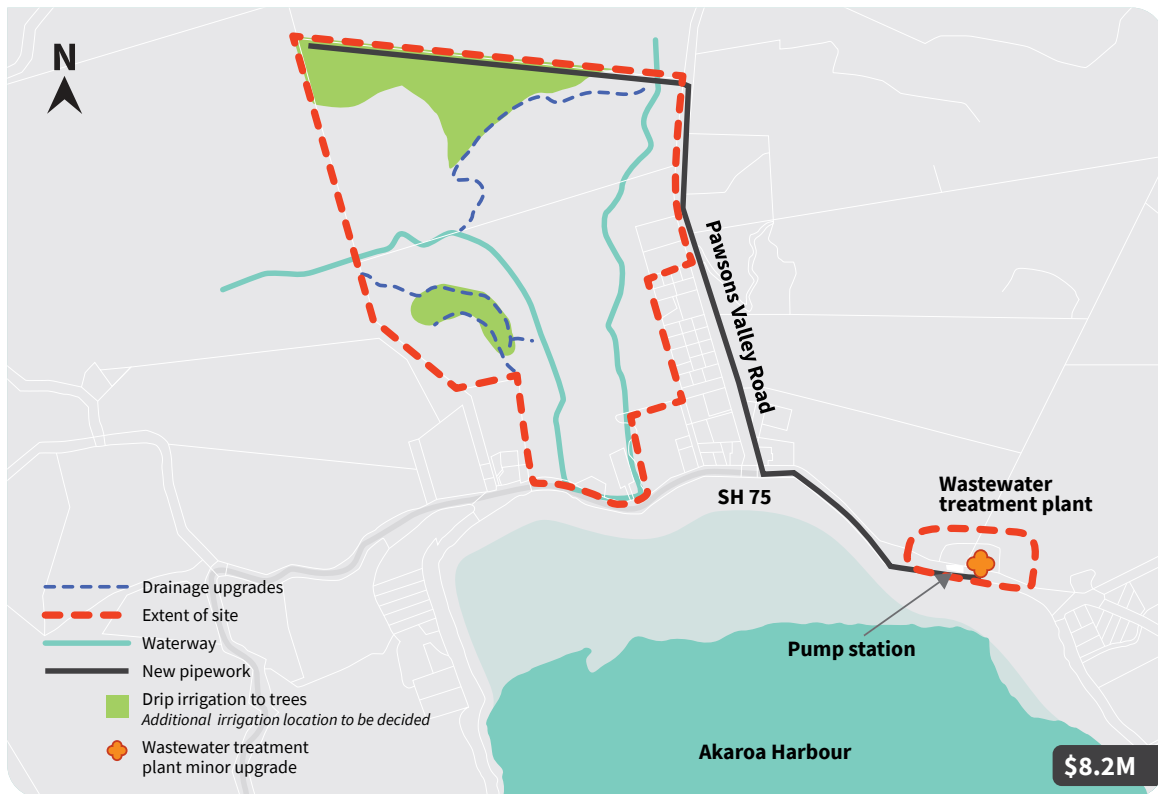
It satisfies the strong desire of Ngāi Tahu that we cease discharging treated wastewater into Akaroa Harbour.

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 interest 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

Christchurch
City Council 

Free 



tape here

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



Duvauchelle treated wastewater options



Analysis of submissions

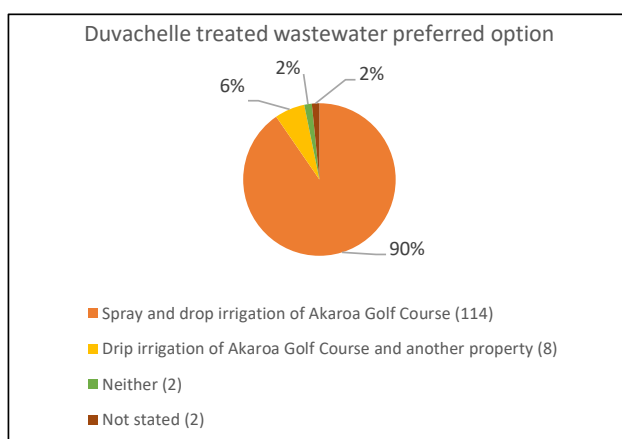
Between 6 May and 7 June 2022, 126 submissions were received on the Duvauchelle treated wastewater options.

Submitter profile

Five submissions are from organisations, three from businesses, two government agencies, one Community Board, and the remaining 115 from individuals.

91 submitters (73%) reside in Banks Peninsula. Some of the remaining submitters state that they holiday in Duvauchelle or use the Akaroa Golf Course regularly.

Feedback



Many submitters select an option without providing any further comment.

Of the submitters that are in favour of spray and drip irrigation of Akaroa Golf Course;

- 30 say that this is because of the higher level of treatment
- 29 are happy that this supports Akaroa Golf Course (in turn helping the Duvauchelle economy through tourism, and the community through providing a social hub that fundraises for other community ventures)
- 17 say that it is a true beneficial reuse that recycles water as opposed to taking it from the stream

- 7 prefer it because of the superior upgrade of the treatment plant

The main reason submitters (five) give for being in favour of drip irrigating Akaroa Golf Course and another property is the cost.

Submitters also provide the following requests and concerns. Many of these comments have to do with the further planning stages of the project and have been recognised by staff.

Requests	
Additional detail on risks to vulnerable people (children)	8
A publicly accessible contingency plan if the system fails	6
Recognition that any odour, noise or degradation of surface ground water is unacceptable	5
Community education and advice on water use	3
Storage tanks rather than storage ponds	3
Active monitoring of consent conditions and making the results publicly available	3
Extension of reuse to include public toilets etc. (to help with area-wide water shortages)	2
Sea level rise and erosion addressed within the planning of scheme	2
A Publicly Notified Resource Consent Application process	1
A peer review of final proposal on behalf of the community – information detail necessary isn't accessible for most people	1
Additional detail on quantities of outputs	1
Concerns	
The future state of Lower Pawsions Valley Stream due to runoff or discharge	9

That discharges to Robinsons Bay was a considered option	5
Does the plan take into account population growth?	3
Effect of irrigation on health of vegetation or wildlife	2
Property owner unknown for option 2 (drip irrigation of Akaroa Golf Course and another property)	2
Additional landscaping ruining views	1

5. Volumes of Submissions

Reference / Te Tohutoro: 22/785236

Report of / Te Pou
Matua: Simone Gordon, Committee & Hearings Advisor,
simone.gordon@ccc.govt.nz

General Manager /
Pouwhakarae: Jane Davis, General Manager Infrastructure, Planning and
Regulatory Services, jane.davis@ccc.govt.nz

1. Purpose Te Pūtake Pūrongo

- 1.1 The purpose of this report is to collate, for the consideration of the Hearings Panel, the timetable of submitters to speak at the hearing, submissions received and further information received from submitters in response to the consultation on the Duvauchelle treated wastewater options.
- 1.2 The items are as follows:
 - 1.2.1 **Attachment A** – Timetable of Submitters Who Wish to be Heard/No Longer Wish to be Heard on 4 July 2022.
 - 1.2.2 **Attachment B** – Table of heard submissions – Submitters who have asked to be heard in person by the Hearings Panel and submitters who no longer wish to be heard.
 - 1.2.3 **Attachment C** – Table of not heard submissions – Submitters who did not indicate that they wished to be heard by the Hearings Panel.
- 1.3 Note, that the Local Government Act 2002 requires, as one of the principles of consultation, that “the views presented to the local authority should be received by the local authority with an open mind and should be given by the local authority, in making a decision, due consideration” (section 82(1)(e)).

2. Officer Recommendations Ngā Tūtohu

That the Hearings Panel:

1. Accepts the written submissions, including any late submissions, received on the Duvauchelle treated wastewater options.

Attachments Ngā Tāpirihanga

No.	Title	Page
A  	Timetable of Submitters - 4 July 2022	28
B  	Duvauchelle treated wastewater options - 4 July 2022 - Submissions to be Heard	29
C  	Duvauchelle treated wastewater options - 4 July 2022 - Submissions Not Heard	54

Hearings Panel - Duvauchelle Treated Wastewater Options

Submitters who wish to be heard

Monday 4 July 2022

Time	Submission Number	Name/Organisation
9.00 - 9.05am		Meeting opened and election of Chair
9.05 - 9.35am		Council Officer presentation and Panel Member questions
Submitters to be Heard		
9.35am	46914	Kevin Simcock on behalf of the Akaroa Golf Club
9.45am	46777	Kevin Simcock (individual)
9.50am	46902	Mark Errington on behalf of Banks Peninsula Early Learning Incorporated & Banks Peninsula Early Learning Trust
10.00am	46775	Michael Simcock (individual)
10.05am	46904	Pam Richardson (individual)
10.10am	46899	Jan Cook on behalf of Friends of Banks Peninsula
10.20am	46909	Nigel Harrison on behalf of the Banks Peninsula Community Board
10.30am	46806	Kenneth Elliott (individual)
Submitters Who No Longer Wish to be Heard		
	46837	Malcolm Anderson
	46913	Robinsons Bay Ratepayers and Residents Association
	46903	Geoff & Liz Carter
	46831	Braden Faave
	46912	Suky Thompson
	46796	Gary Knight
	46897	Sue Church
	46910	Jan Cook
	46911	Brent Martin

Item 5

Attachment A

Submissions received on the Duvauchelle treated wastewater options

Submitters to be heard

ID	I would like to speak to the Hearings Panel about my submission	How should Duvauchelle's treated wastewater be used?	Comments	Name
46914	Yes	Spray and drip irrigation of Akaroa Golf Course	Akaroa Golf Club Submission attached	Kenneth Elliott on behalf of Akaroa Golf Club Inc.
46913	Yes		Please see submission attached	Suky Thompson on behalf of Robinsons Bay Ratepayers and Residents Association
46912	Yes		<ul style="list-style-type: none"> I support neither option because, like the Akaroa scheme, they make the wastewater system less resilient in the face of the impacts of climate change. The recent storm damage to Banks Peninsula's eastern bays highlights the high vulnerability of the landscape to damage from slips, whether vegetated or not. Duvuauchelle is also vulnerable to the effects of sea level rise. The schemes also introduce contaminants into a built-up area. Wastewater treatment (including ultrafiltration) does not remove all nutrients, pharmaceuticals and other chemicals including so-called "forever chemicals"; only reverse osmosis or distillation has the potential to do this. These contaminants have the potential to build up in the soil and leach into Pawsons stream, contaminating it and the Duvauchelle mudflats. Either system further has the potential to contaminate the land and cause residents harm in the event of a malfunction at the plant. We have seen from the Bromley fire that problems do happen, and they can take a long time to solve to the detriment of anyone living close to them. As with the Akaroa/Robinsons Bay scheme, the proximity to residences means the impact of any failures will be large. In the case of Duvauchelle, there is also the health and wellbeing of the neighbouring schoolchildren to consider. Whatever system is selected, the harbour outfall should be retained so that, in the event of any system failure (including being undersized), any excess wastewater, treated or untreated, can be safely dispersed by dilution out at sea rather than polluting Duvauchelle and surrounding bays. Whatever system is selected, the wastewater should be retained at the treatment site and tested before it is released to ensure that it always meets the consented standard before it is released to the environment. I note that Robinsons Bay was also on the long list as a potential recipient of Duvauchelle's wastewater; the Council should not be even considering sending yet more wastewater to Robinsons Bay under any circumstances. 	Suky Thompson
46911	Yes		<ul style="list-style-type: none"> I support neither option because, like the Akaroa scheme, they make the wastewater system less resilient in the face of the impacts of climate change. The recent storm damage to Banks Peninsula's eastern bays highlights the high vulnerability of the landscape to damage from slips, whether vegetated or not. Duvuauchelle is also vulnerable to the effects of sea level rise. The schemes also introduce contaminants into a built-up area. Wastewater treatment (including ultrafiltration) does not remove all nutrients, pharmaceuticals and other chemicals including so-called "forever chemicals"; only reverse osmosis or distillation has the potential to do this. These contaminants have the potential to build up in the soil and leach into Pawsons stream, contaminating it and the Duvauchelle mudflats. Either system further has the potential to contaminate the land and cause harm to local residents in the event of a malfunction at the plant. We have seen from the 	Brent Martin

			<p>Bromley fire that problems do happen, and they can take a long time to solve to the detriment of anyone living close to them. As with the Akaroa/Robinsons Bay scheme, the proximity to residences means the impact of any failures will be large. In the case of Duvauchelle, there is also the health and wellbeing of the neighbouring schoolchildren to consider.</p> <ul style="list-style-type: none"> • Whatever system is selected, the harbour outfall should be retained so that, in the event of any system failure (including being undersized), any excess wastewater, treated or untreated, can be safely dispersed by dilution out at sea rather than polluting Duvauchelle and surrounding bays. • I note that Robinsons Bay was also on the long list as a potential recipient of Duvauchelle's wastewater; the Council should not be even considering sending yet more wastewater to Robinsons Bay under any circumstances. 	
46910	Yes	Spray and drip irrigation of Akaroa Golf Course	<p>The wastewater must be treated to a modern standard that eliminates pathogens and is safe for human contact.</p> <p>Option 2- It is disappointing that the Council is even considering the disposal of inadequately treated wastewater within a public area and residential community. The consultation document does not explain the different treatment standards and that people would need to be excluded from the irrigated areas.</p> <p>It is not clear whether the cost estimate of \$8.2M includes the cost of extra land still to be procured.</p> <p>The staff opinion that Option 2 'has a good cost-benefits balance' is not substantiated.</p> <p>I strongly oppose Option 2.</p> <p>Option 1 – While this appears as the only acceptable option there is insufficient information in the consultation document to enable informed support for it.</p> <p>The maps are rudimentary, confusing and appear to include more than just the Golf Course.</p> <p>Duvauchelle suffers from chronic water shortages and the scheme should include provision for potential wastewater reuse in the community. In addition water conservation initiatives and incentives need to be in place which will both reduce water consumption and the volume of wastewater.</p> <p>In light of the current appalling situation at Bromley, the Duvauchelle scheme must, in consultation with the local community, fully consider potential risks from climate change, disaster and system failure and have measures in place to manage and respond to these.</p>	Jan Cook
46909	Yes	Spray and drip irrigation of Akaroa Golf Course	Please see attached submission.	Katie Matheis on behalf of Te Pātaka o Rākaihautū Banks Peninsula Community Board
46904	Yes	Spray and drip irrigation of Akaroa Golf Course	<p>I welcome the opportunity to comment and pleased to see the disposal to land proposals being considered . Despite Option One being more costly it's important that the we use good practice and look to new initiatives to reuse the highly treated waste water .</p> <p>Duvauchelle water supplies are already restricted . Climate change is with us - warmer drier climate and we need to be addressing the water short catchment water supplies .</p> <p>We need to be 'ahead of the game ' and addressing new ways of using the highly treated waste water so as to conserve use of very precious stream water takes.</p> <p>We could also be working through and designing a system that allows natural water flow including following a very heavy period of rain in the lower catchment area .</p> <p>I appreciate the dedicated site so as to follow the progress of the Duvauchelle system acknowledging that information available needs to be understood at number of 'reader ship levels' with the option for access to full reports .</p>	Pam Richardson

			We are connected to the present Duvauchelle system and need to focus on how we can reduce our water input and would like to see community education and advice being available - we need to care for our environment . I am a long time member of the working group and look forward to working with the CCC team to achieve a good outcome for us all.	
46903	Yes	Spray and drip irrigation of Akaroa Golf Course	We favour Option One because: - it is the best option for the long term care of the environment - it is a practical use of a waste product, whilst benefiting a local community sports club members and visitors - it is innovative and could lead to more sites making use of recycled water - it comes within the budget that has been set by the Council	Geoff & Liz Carter
46902	Yes	Spray and drip irrigation of Akaroa Golf Course	Full Submission attached.	Mark Errington on behalf of the Banks Peninsula Early Learning Inc. and Banks Peninsula Early Learning Trust
46899	Yes		See attached submission.	Sue Church on behalf of Friends of Banks Peninsula
46897	Yes		See attached submission.	Sue Church
46837	Yes	Drip irrigation of Akaroa Golf Course and another property	We support Option 2 as providing a more sustainable and cost effective long-term solution to the treatment of Duvauchelle treated wastewater. This options also increases the biodiversity of the area and provides corridors for native species by linking with existing native bush and other plantings. Option 1 is more expensive, the golf course lacks bio-diversity values and does not link with any natural corridors. Option 1 also by default supports an activity that does not sit well with a future that will be governed by climate change. Gold courses are essentially monocultural, require an inordinate amount of water, contribute to greenhouse gas emissions and use vast amounts of pesticide. We note the huge amount of storage need for both options (3,800 cu m for Option One) and the lack of information about where these will be placed and how risk from these will be mitigated. We do support the golf course as a key component of the Banks Peninsula destination mix and recognise it's value as a social activity. Option 2 provides an outcome more in keeping with the future of Banks Peninsula while recognising the assets associated with the golf course.	Malcolm Anderson
46831	Yes	Spray and drip irrigation of Akaroa Golf Course	<div style="background-color: black; height: 1.2em; width: 100%;"></div> would like to know whether the council can guarantee there will be no cross-border contamination or odour. If those guarantees can only be made under normal circumstances I would like to know what impact plant failure or negligent operations may have on the educational facilities. I would like to know how much modelling there has been done for possible overflow events, including natural disasters, and whether the potential for closure of the schools due to any overflow have been included in the model. Other questions I have is whether there is a back-up plan should, the holding tanks be full and the land saturated. Does the back-up plan include discharge into Pawson Valley Stream? I am also curious as to whether the impacts of sea level change have been modelled and the degree to which possible rises may or may not impact on this scheme.	Braden Faavae

			As the two options stand I am forced by restriction of choice to prompt for option 1. The reasons for this is the higher grade of treatment protects the health and safety of the community better, including my children.	
46806	Yes	Spray and drip irrigation of Akaroa Golf Course	<p>I can only support Option 1 because this option involves the upgrade of the existing treatment plant in order that the wastewater is treated to the standard which meets public health requirements for irrigation to land used for recreational purposes. As such it introduces the beneficial water reuse component, namely the improved irrigation of the Akaroa Golf Club fairways and greens. It also future proofs the scheme for possible reuse to domestic gardens and the like as Duvauchelle's population grows.</p> <p>Irrigation, particularly through the Summer months, will maintain the fairway and greens to the highest playing standards enhancing the playing experience of both members and visitors to the course. Akaroa Golf Club has a current membership close to 300; providing a wonderful recreational use for the community and holiday home owners. 10% of members are under the age of 18 years so there is an active youth component.</p> <p>The golf course has been recognised as a 'hidden gem'; its a beautiful course in a valley with many native trees supporting bellbird (korimako), tui, kereru and fantails (piwakawaka). In addition it has streams running through it and in total these natural features provide a wonderful ambiance. The planned additional planting which is part of Option 1 will further enhance these features.</p> <p>Currently the Akaroa Golf Club has 3,000 visitors per year. These green fee players provide a valuable source of income to the Golf Club as well as revenue to hospitality businesses in the community. We (the Golf Club) get so many positive comments from visitors as to what a great course we have. With the improvements that this option will make we can expect further favorable comments and an increasing cause for Akaroa as a destination for tourists.</p> <p>Finally, having been involved as a representative of the Golf Club in discussion with Council staff, I have been privy to seeing the detailed engineering plans for drainage as well as the golf landscaping plans. These have been instigated and paid for by Council. Our Golf Club is fortunate to have such plans which are so thorough and detailed to assist in bringing about an excellent outcome. I thank The Christchurch City Council for their approach.</p> <p>Ken Elliott, M Ag Sc, PhD, local farmer, and Club Captain, Akaroa Golf Club.</p>	Kenneth Elliott
46796	Yes	Spray and drip irrigation of Akaroa Golf Course	<p>The recycled waste water MUST be treated to the Highest level possible, requiring upgrading of the treatment plant. For the health & safety of all Golf Course users and the surrounding neighbours, including School & Pre School. Its a No Brainer!</p> <p>Option 1 is the only BENEFICIAL RE-USE and a wonderful resource that should be used for the highest and best use - on a recreational reserve - Golf Course.</p> <p>Only option 1 will allow spray irrigation, proven hundreds of times over in Australia to be the only workable method of irrigation on a golf course. All other methods are problematic & fail.</p> <p>An fully irrigated golf course will encourage more beneficial tourism business to the area.</p> <p>The Golf Club has 32 under 18yrs members, these kids deserve the best possible facility.</p> <p>BENEFICIAL re use of waste water is the future !!!</p> <p>Upgrading of the Treatment plant will open the door to future to re use on other recreational facilities, and eventually residential/garden use. It will help future population growth.</p> <p>Option 2 is essentially just a dumping ground option, with minimal benefit to anyone or anything.</p>	Gary Knight
46777	Yes	Spray and drip irrigation of Akaroa Golf Course	<p>See the attached submission document.</p> <p>I also want to record my strong negative view of the proposed lack of treatment of the wastewater for Option 2. To irrigate the ground to the point where "managed access" is required is a sad blight on the view of a long term sustainable community. My grand children could walk through the wooded areas searching for my lost golf balls at present. To consider it acceptable to take that freedom away is wrong.</p>	Kevin Simcock
46775	Yes	Spray and drip irrigation of	<p>Great use of a difficult resource to align the interests of many parties, I like this solution. I think this benefits the community, the golf club, and the environment.</p> <p>I am concerned about Option 2 and the vagaries of the suggestion - it doesn't seem as well developed or to have the same level of community support.</p>	Michael Simcock

		Akaroa Golf Course		
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Submission #46914

Akaroa Golf Club Inc.

77 Pawsons Valley Road
Duvauchelle
P.O. Box 42
Akaroa 7542
Banks Peninsula

T: 03 304 5704
F: 03 304 5705
E: akaroagolf@xtra.co.nz
W: www.akaroagolf.co.nz



Submission from
The Akaroa Golf Club
Beneficial reuse of the Duvauchelle Wastewater
On
Akaroa Golf Club Golf Course

The Akaroa Golf Club only supports Option 1; spray irrigation to the playing areas with drip irrigation to planted course margins of highly treated wastewater.

Our support is based on the extensive discussions and promises from Christchurch City Council that;

- they will cover the running and plant costs associated with greater mowing requirements from increased grass growth; and
- drainage and new plantings will be in accordance with the designs prepared by Nic Kay in association with the Christchurch City Council advisors, and approved by the Akaroa Golf Club.

Introduction

There are many benefits to the reuse of the treated Duvauchelle wastewater on the Akaroa Golf Course. This submission outlines these benefits

Cultural Wellbeing

Cultural wellbeing is defined as:

The vitality that communities and individuals enjoy through:

- *participation in recreation, creative and cultural activities, and*

Submission #46914

- *the freedom to retain, interpret and express their arts, history, heritage and traditions.*

Particular aspects relevant to the beneficial reuse of the wastewater on the golf course are:

- Recognition of the cultural importance of the Akaroa Harbour to the Ngai Tahu people and the passionate desire to remove human wastewater from that harbour
- This is a land-based disposal option with a beneficial reuse component
- Supporting sport and recreation for all on the Peninsula by presenting the golf course playing surface in a consistent, and much improved, high standard condition for all year round play.
- Recognising and continuing the history of the original deed of sale which noted the land was to be held 'in trust for recreation purposes'.
- This is an innovative approach to dealing with significant cultural issues.
- This is an investment in the future and heritage of the Banks Peninsula region

Social Wellbeing

The Social Report identifies social wellbeing as being:

those aspects of life that society collectively agrees are important for a person's happiness, quality of life and welfare.

Akaroa Golf Club has for 100 years been part of the sporting environment for the Banks Peninsula people. The present golf course started from bare farmland. Members with their own tractors and diggers carved out the current 18 hole course. Ongoing tree planting and golf course maintenance has always been undertaken largely by voluntary work from its members. The necessary community spirit and input has with time developed a fine golf course admired by both members and visitors.

The Akaroa Golf Club course has received high ratings from numerous golf writers for its beauty and its challenge. T [REDACTED] rates the third hole as one of the top 100 holes in New Zealand. The course rates in Golf NZ's top 2 hidden gem golf courses in Canterbury.

The Akaroa Golf Club is benefiting by a national interest in golf and resurgence in golf membership. The Club has grown from just over 200 members in early 2000, to 275 members today. 30 of those members are junior golfers (under the age of 20). Membership caters for a good number of active retired men and women living in the community. In addition it has a strong membership of working-aged people both from within the community as well as those owning holiday properties. Family participation is a strong element of membership with 3 generations not uncommon. The mix of local farming and business people, plus the variety of working people from the urban areas of Christchurch and Ashburton is the basis of a Club with diversity and a great spirit among its membership.

The environment is not only about golf. A typical round takes 3-4 hours for the club members. That is followed by 1.5 – 2 hours chatting, buying raffle tickets and catching up with the local news in the

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club house. The Golf Club provides an opportunity for an eclectic group of people to mingle and socialise. Helping those that are less fortunate or sick, business opportunities or decisions, teaching new skills, fundraising for the community are just some of the outcomes of this social interaction.

The course is open 7 days a week, 52 weeks of the year for members and visitors. Green fee and tournament playing visitors currently number about 3,000 rounds per year.

The Golf Club assists annually with the Duvauchelle A & P Show. The Golf Club and Show committees have a close working relationship. The Club provides water to irrigate the show grounds for the week prior to the show. Club members utilise a shed on the grounds for storage of golf carts paying rent that helps with the A&P Association's costs. Some of the golf course holes are used for safe, off the main highway parking on the days before and during the show. The interaction of the two organisations connects a large majority of the Peninsula's residents.

Maintaining a healthy golf club is a key part of the social wellbeing of the Banks Peninsula's community. The irrigation of the golf course with treated wastewater will assist in maintaining a pristine golf course.

Economic Wellbeing

The Golf Club has another role in the economic wellbeing of the Banks Peninsula community. The Club in association with the Akaroa Lions holds an annual golf tournament. Over the last 10 years that tournament has raised over \$150,000 for community projects such as the Akaroa Health Hub (twice), the Westpac Rescue Helicopter (twice), Duvauchelle Pre School, various Akaroa Primary Schools, Okains Bay Museum, and other miscellaneous local causes.

The New Year's mens' and womens' tournaments have players from all around Canterbury who travel to play in what is known as special tournaments on the annual golf calendar. These people stay in the Akaroa area and help feed into the tourist and hospitality markets.

In the last year, over 3,000 visitors have played at the course. Most of these spend the weekend and eat in the area aiding the local economy.

The Club runs raffles that purchase approximately \$20,000 of meat from the Akaroa butcher. Such a large base customer in the quieter winter months is what enables operators such as the butchery to keep their staff and survive the winter months of reduced business.

Not only is the reuse of the wastewater at the Akaroa Golf Club an attractive capital cost, it also continues the significant economic role the organisation plays in the overall economic wellbeing of Banks Peninsula.

Environmental Wellbeing

Irrigation of the wastewater for the Golf Club is a REUSE of that wastewater. This reuse will enhance the golf course quality and enable a uniform overall standard for the course throughout the year.

The reuse of the wastewater on the golf course requires that water to be treated to the same level as the proposed Akaroa solution. This is to a level that will enable the wastewater to be reticulated

Submission #46914

to homes as a purple pipe solution in the future. With water predicted to be a scarce resource on the Peninsula in the future (climate change driven), treating the water to a higher level is an investment in the future. It is also a responsible response to ensuring the sustainability of the planet.

Currently the course is irrigated by water taken from the streams that run through the course. Using recycled wastewater will mean that the take from those streams will be very much reduced if not completely stopped. That in turn will increase the streams' flows and improve the streams' ecology. Those streams are home to a number of native invertebrates. Their environment will be enhanced with wastewater reuse on the golf course.

A key part of the design and proposed works on the existing course is to increase the areas of native planting. This is to provide winter irrigation areas and to assist in beautifying the course further (like the Wairakei Golf Club nature reserve). Native plantings will enhance the bird life on and around the golf course.

Enhancing the stream life, enhancing the bird life, increasing the areas of native planting show that the Golf Club solution is a truly environmentally beneficial reuse of the Duvauchelle treated wastewater.

Conclusion

Of the solutions proposed by the Christchurch City Council study, only wastewater reuse on the golf course creates a WIN - WIN outcome. There are benefits in all the key wellbeing measurements. The Golf Club and course are central components in the Banks Peninsula economic and social world already. With the reuse of the wastewater, the Golf Club will take a sustainable stake in the cultural and environmental wellbeing.

The Akaroa Golf Club does not support Option 2 because placing partially treated wastewater close to the golf course on recreation designated land is not acceptable to golfers using the course, as well as our neighbours. This sentiment is repeated by other community organisations in their submissions which have been copied to us, such as Friends of Banks Peninsula Inc., Banks Peninsula Early Learning School, and Akaroa Ratepayers and Residents Association. We would like to thank them for their support.

Gary Knight
President

Ken Elliott
Club Captain

Kevin Simcock
Convenor, Wastewater sub-committee

Submission #46913

Robinsons Bay Ratepayers and Residents Association

**Submission to Duvauchelle Wastewater Consultation
Submitted 7 June 2022**

1. The Robinsons Bay community has a lengthy experience with wastewater issues, as the recipient community for the Akaroa wastewater scheme.
2. We strongly believe it is up to the affected communities to express their support or lack of support for particular options, not outside parties.
3. We therefore choose to comment on the options put forward based on our experience to date rather than support or oppose either option. In doing so we stress the key factors are to:
 - a. acknowledge that there are risks involved with being close to a wastewater disposal site and these have to be minimised and managed through:
 - i. aiming for the highest possible treatment standard
 - ii. ensuring that application rates are compatible with the ability of the land to take up the water, nutrients and potential contaminants over the long term to avoid harm to the natural environment – including its streams and shallow bay
 - iii. minimising impacts on the surrounding neighbours and community and taking their views about what is important to them into account
 - b. recognise that clean water directed to places where it is needed is a precious commodity that
 - i. is likely to be more precious in the future, and
 - ii. maximising genuinely beneficial re-use can bring benefits that help to compensate a receiving community for the increased risk
 - iii. provided that they are shared in an equitable way
4. We see the following issues with both options:
 - a. Treated wastewater will be irrigated in the middle of the Duvauchelle community, close to residences, businesses, clubs and immediately upstream from a primary school.
 - b. This has the potential for negative effects from both the storage and irrigation of treated wastewater, including potential for odour, midges/mosquitos, nutrient build-up and leaching into Pawsons stream, and potential for contamination of public spaces and the stream.
 - c. These effects may occur because the treatment plant does not have the ability to eliminate all pollutants, including chemicals and pharmaceuticals and would be exacerbated by plant malfunction.
 - d. Both schemes include potential discharge of treated or untreated overflows to a stream or the harbour. This is a worse outcome for the environment than the current harbour discharge, which does not result in any wastewater being disposed of to a stream or the shallow bay.
5. We see the following additional issues with Option 2
 - a. It includes only a minor upgrade of the treatment plant, meaning the wastewater being stored and irrigated will be of a much lower standard, and therefore potentially more harmful to the community and the environment.
 - b. It is not beneficial reuse, it proposes only to drip irrigate water to trees that already exist without a need for the water, or will be planted for the purpose of taking it up.

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Attachment B

Submission #46913

6. In comparison we see some benefits to Option 1
 - a. It involves a significant upgrade to the treatment plant meaning the wastewater is of a higher standards
 - b. Re-use of the water to irrigate the golf course will have benefits during dry periods when the course would have been irrigated, putting less pressure on the local stream
7. Finally we express our concern that should the irrigation field proposed for the Duvauchelle scheme prove inadequate in the longer term that this could have negative impacts on Robinsons Bay
 - a. We note the scheme sizing does not provide for significant growth of the Duvauchelle community
 - b. That there is no "Plan B" should the disposal field fail (for example if the area is damaged by storms and slips similar to those recently experienced in the Eastern Bays)
 - c. We would oppose the directing of any wastewater from Duvauchelle to Robinsons Bay given that Robinsons Bay is already going to take all the wastewater from Akaroa.

Submission #46909

To: Christchurch City Council
PO Box 73017
Christchurch 8156
Email: Hannah.Ballantyne@ccc.govt.nz

Submission On: Duvauchelle Treated Wastewater Options

By: Te Pātaka o Rākaihautū / Banks Peninsula Community Board

Contact: Lyttelton Service Centre
PO Box 73027
Christchurch 8154
[REDACTED]

Date: 7 June 2022

1. INTRODUCTION

Te Pātaka o Rākaihautū/Banks Peninsula Community Board (the “Board”) appreciates the opportunity to share its feedback with the Christchurch City Council on the Duvauchelle Treated Wastewater Options consultation.

The Board’s statutory role is “to represent, and act as an advocate for, the interests of its community” and “to prepare an annual submission to the territorial authority for expenditure within the community” (Local Government Act 2002, Section 52). The Board is providing this submission in its capacity as a representative of the communities in the Banks Peninsula Ward – Akaroa, Ōhinehou Lyttelton, Te Waipapa Mount Herbert, and Wairewa Little River.

2. SUBMISSION

The Board is pleased to support Option 1 – spray and drip irrigate Akaroa Golf Course – as it believes this approach will provide the best long-term outcome for the community, and is responsive to the cultural, social, economic, and environmental wellbeing of the area. The Board strongly supports the cessation of discharging treated wastewater to Akaroa Harbour, and recognises the importance of this step for mana whenua.

The Board believes Option 1 best reflects the wishes of the community, Ngāi Tahu, the Duvauchelle Wastewater Working Party, and the Akaroa Golf Course. Further, this option is better suited to addressing historical water shortages in the area, especially during dry conditions, as it significantly reduces the need to take water from the stream for irrigation of the Golf Course, which is a Council reserve. As the capital cost of Option 1 is estimated to be \$1.3 million below the amount budgeted for the project, the Board supports this option and believes it will help ensure reduced water usage and a long-term solution for sustainability and ecological improvement. The Board is also concerned that Option 2 may result in additional costs beyond those indicated in the consultation document as it requires either the purchase of land or a land-lease arrangement, the costs of which have yet to be outlined or confirmed.

Yours sincerely,

Tyrone Fields
Deputy Chairperson
Te Pātaka o Rākaihautū/Banks Peninsula Community Board

Submission #46902

**Banks Peninsula Early Learning Incorporated and Banks Peninsula Early Learning Trust
Submission to Duvauchelle Wastewater Proposal**

Banks Peninsula Early Learning owns and operates the business of the Early Learning Centre in Duvauchelle formally owned by Plunket. It operates on land leased from the Duvauchelle Primary School. The Banks Peninsula Early Learning Trust owns the building out of which the ECE operates. Both are immediate neighbours to the Golf Club and are affected parties. We are at the bottom of the slippery slope!

We accept that the Community needs a solution for the disposal of wastewater. We are not opposed to the concept of on land based disposal. Neither of the current proposals are fully developed. Both proposals have issues, most of which are in common, and these need to be addressed in the planning stages prior to applying for the necessary Resource Consents.

We strongly favour Option 1 (Spray and drip irrigate Akaroa Golf Course) because this option purifies the treated water to a much higher standard, and therefore reduces the health risks to the community and the environment. Option 2 will leave areas of land that will require public access to be restricted owing to the pollution.

I would like to speak to the Hearings Panel about our Submission.

1. Safety of Human Health

The report has adopted an Australian human standard of a “recreational and outdoor worker”. This is presumably a fit and healthy Australian adult.

Our “humans” are a much more vulnerable population. We accommodate very vulnerable pre-schoolers, and the primary school has primary age children. Both are exposed each and every day. The Golf Club also has an active junior membership with players from as young as 9. There are also vulnerable elderly people living in Duvauchelle School Lane.

The Australian standard has multiple levels and does not discriminate between workers and children. The standard to be used in this proposal must be defined. Rather than simply concluding that the proposal is safe for humans, it must conclude safety against a known and appropriate standard.

We feel that specific research is needed to confirm on a scientific basis that the proposal is safe for our vulnerable human population.

2. Safety of Dairying

We have been told that if dairy cows were grazed on the school grounds, that are adjacent to and lower than the ground on which treated wastewater is applied, that the milk would be rejected by Fonterra as unsafe for human consumption due to pollution from wastewater irrigation. We have been given reassurances that this is just a branding and marketing position from Fonterra, but we would like confirmation that there is absolutely no scientific reason why such milk would not be safe for human consumption. If the land becomes unsuitable for grazing cows, how can it remain suitable for running children?

3. Safety of Storage facilities.

It has not yet been decided how much wastewater will be stored, or where it will be stored, or if it will be stored in ponds or tanks. Once the facility is designed, it is important that a detailed analysis of how it would perform in the event of catastrophic failure is completed. For example, if the Alpine Fault was to rupture in an earthquake, would we see a tidal wave come down the hill capable of sweeping toddlers away?

Banks Peninsula Early Learning - Duvauchelle Wastewater Proposal Submission

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Attachment B

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4. Odours and Nuisance

In all the hundreds of pages of these reports, I could only find 2 paragraphs relating to effects on the environment and adverse effects. These include, but are not limited to, visual impacts, odour, spray drift, surface water, groundwater, and noise. Comment is made that the site is located in proximity to some sensitive receptors including residences and schools and that appropriate design will be required to address and mitigate risks to local sensitive sites. We contend that it is necessary to identify all risks. Mitigation may not be sufficient, as this proposal must not reduce our quiet enjoyment of our properties. Elimination may be required. It must be recognised that any odour, noise or degradation of surface or ground water is unacceptable.

5. Lower Pawsons Valley Stream

The lower Pawson Valley Stream is a problem. Three times in the last 2 years, flooding has necessitated gates being opened to release flood waters onto the School's playing fields to avoid inundation of School buildings. The stream cannot take any additional or accelerated runoff, and there is a concern that more moisture sprayed and dripped into the land above prior to a rain event, will more quickly generate increased runoff during high rain events. Additional flows are also likely to come from the swale proposed across the top of the School and Preschool that will drain water from the Golf Course and Pawsons Road area. These increased speed and volume of peak flows will add to the existing flood risks.

It is also noted that once the storage tanks are full, it is proposed that the overflow will go into Pawsons Stream, via a wet land path. Particularly if this wetland area is saturated, what is the potential additional runoff, and can lower Pawsons Valley Stream cope?

There is an opportunity to create a significant community benefit, particularly to the School, by improving this watercourse. It is not a natural watercourse – the meandering line of the stream has been modified. It may need to be both realigned (to reduce scouring) and lined (to handle higher velocity water).

The final design must demonstrate that the lower Pawsons Valley Stream can handle the anticipated peak flows without flooding, especially after prolonged wet weather periods that may last for weeks or months.

6. Quantifying the system.

There is a concern that there is nothing quantified in this proposal. All participants have a sense of the order of magnitude of this project, but the scale is not stated. Appropriate limits need to be adopted to cover:

- The daily and monthly outputs from the Duvauchelle water treatment plant directed to this proposed system.
- The installed volume of storage
- The quantity of water that can be spray irrigated each day and month
- The quantity of water that can be drip irrigated each day and month
- The quantity of water that can be released from storage in an overflow situation

This proposal is intended to cover the current and future growth needs of the immediate Duvauchelle community. Any future proposal to add additional wastewater volumes from elsewhere, including possibly Akaroa, must require a new proposal of design, consultation, and consent.

Submission #46902

7. Peer review

We are concerned that CCC are both the judge and jury in this matter. CCC Staff brief and contract external consultants, who report to the CCC Staff. The same CCC staff review the proposals, and then as Applicants, seek Consents from other CCC Staff. The role of ECAN in some Consents is noted. To avoid any conflict of interests, or the appearance of the same, we feel that it is important that a suitable qualified independent party conducts a peer review on behalf of the Community of the final proposal.

We also note that CCC Staff will decide if a Publicly Notified or Limited Notification Resource Consent Application will be required. Because of the significant impact over the wider Community in the area, we feel that a Publicly Notified Resource Consent Application is required.

8. Landscaping

The landscape architectural plans show “wetlands” proposed immediately above our boundary fence. Clearly this raises concerns about the ground conditions in our outdoor play areas. I’m told that this is not part of the current design solution, and that alternative planting will be proposed. We are keen to see this clarified! Maintenance of these plantings also needs to be provided for.

A very real benefit of the location of our Preschool is the sunny northerly outlook to wide open spaces and the sight lines enjoyed by our pre-schoolers towards the Golf Club. Any plantings that reduce sunshine or our view would be most unwelcome. Thoughtful design should be easily able to overcome this, and we would like to be consulted on the height and setback of plantings immediately over our boundary.

9. Accessibility of Information.

The information provided to the community totalled 638 pages. Questioning on multiple aspects indicated that not all of this material was relevant, and some was redundant and should not have been included. This information is too technical for most people in the Community, and few can absorb this quantity of information presented in this way, yet a few pages of a pretty public relations summary does not cover enough. The quality of the information is more important than the quantity!

There needs to be a better way of minimising and cataloguing this information for public presentation, with each section covered by an adequate executive summary, with further information included for those who need further detail.

10. Hybrid Proposal

Option 2 includes drip irrigation onto trees on another nearby property, which appears to be available at quite reasonable cost. Has consideration been given to a hybrid solution treating all water to the higher level of option 1, and then disposing of that fraction of the volume that is beneficial to the golf course on the course and disposing of the second fraction onto this nearby property, and the balance if any on to the Golf Course for drip irrigation and storage and eventual overflow into Pawsons Stream? This would increase the capacity of the entire system, and possibly reduce the storage needed and the risks ground saturation, overflow and added runoff.

11. Extraneous Information.

The published appendices to the report included infiltration proposals culminating in a major soak pit on the fairways 150 metres above the Preschool. None of the soil testing and ground test bores occurred in this area. This generates obvious concerns from us, yet we are told that this is no longer proposed.

Submission #46902

Summary.

We are quick to accept that many of the issues above relate to details that have not yet been considered or determined. However, they are all points that we feel need to be addressed and should be conditions applying to the design process. This would be better than debate during the resource consent process.

We submit that the following should be included as conditions on any proposed Consents:

1. That appropriate research confirms that this proposal is safe for our specific vulnerable human population.
2. That appropriate technical and scientific analysis confirms that any dairy or other food products grown on the School and Preschool land is safe for human consumption.
3. That appropriate analysis demonstrates that catastrophic failure of the water storage facility does not represent a risk to our people.
4. That all risks of odour and nuisance are identified and eliminated in the case of odour and mitigated to an acceptable level for other risks
5. That the final design demonstrates that the lower Pawsons Valley Stream can handle the anticipated peak flows without flooding, especially after prolonged wet weather periods.
6. That all features of the system are quantified with appropriate limits applied.
7. That a positive peer review on behalf of the Community by a suitably qualified independent party is included in the final proposal.
8. That we are consulted on the height and setback of plantings immediately over our boundary.
9. That a Publicly Notified Resource Consent Application is required.

Mark Errington
Trustee / Governing Committee
Banks Peninsula Early Learning

6 June 2022



Banks Peninsula Early Learning - Duvauchelle Wastewater Proposal Submission

Submission #46899



Christchurch City Council
Duvauchelle Treated Wastewater Options Consultation (2022)
Submission of: Friends of Banks Peninsula

P O Box 56, Duvauchelle 7581

6 June 2022



The Friends of Banks Peninsula welcomes an opportunity to speak in support of this submission.

Introduction.

Friends of Banks Peninsula Inc. (FoBP) was established in 1990 to protect and enhance the environmental heritage of Banks Peninsula and safe-guard the environment for future generations. Objectives include working to link individuals and small groups concerned with local environmental issues, and to work with local authorities and central Government to promote sound environmental practices.

FoBP has been closely involved with wastewater issues around Akaroa Harbour for many years, advocating for safety, resilience and sustainability, including:

- Fullest possible repair of sewer pipe network to reduce the volume of wastewater, so that the amount of storage and irrigation required is reduced and sustainability and resilience is improved.
- Encouraging water conservation measures in light of ongoing water shortages and increasing uncertainties due to climate change.
- Introducing the concept of covered Kliptanks for storage, to avoid the risks associated with large storage dams.
- A purple pipe network for recycling wastewater to help address chronic water shortages.
- Ensuring a high level of treatment, including UV treatment, so that there can be public confidence in the safety of irrigation areas and reuse schemes.
- Appropriate setbacks from neighbouring properties and amenities, and avoiding sensitive areas such as sites of historic significance.

FoBP has been involved with the Duvauchelle wastewater project, through the Duvauchelle working party, and earlier working parties. The scheme must be safe and resilient, especially taking into account the close proximity of proposed irrigation fields to water bodies, public spaces, private residences and a school and pre-school.

Submission #46899

Minimum requirements for the scheme

We submit that the following are minimum requirements for any wastewater disposal scheme to minimise environmental and social harm:

- Wastewater treatment and disposal must be safe, sustainable and resilient. In particular it must take into account the risks and uncertainties of climate change and the potential risks of concentrated, long term irrigation of wastewater in a public space, close to water bodies, a shallow mudflat bay and a residential community.
- All wastewater for irrigation needs to be treated to a sufficiently high standard, including UV treatment, that will avoid environmental impacts and ensure public safety by removing pathogens and other harmful contaminants. This will promote public confidence in its re-use.
- Storage should be in covered tanks, not open dams. Tanks should be distributed in a way that provides maximum resilience, and connected in a way that allows each tank to be isolated if necessary.
- An outflow buffer tank needs to be included in the scheme design to ensure all wastewater is tested and compliant before being released for irrigation.
- Irrigation rates must avoid negative environmental impacts and be sustainable over the life of the scheme.

Regular monitoring needs to ensure that:

- Irrigation rates do not result in soil saturation, ponding or run-off.
- Drip irrigation does not affect the health of the receiving vegetation.
- Nitrogen, phosphates, pharmaceuticals, heavy metals and other contaminants do not build up in soil, streams and shallow bays.
- Stream water quality below the irrigation fields is not degraded compared to that above.
- Wildlife including inanga, flounder and shellfish are not affected.
- There is no build-up of odour, insect or bird/wildlife pests

Accountability and future proofing:

- Consent conditions must ensure that appropriate monitoring is taking place, that any non-compliance is addressed in a timely way, and that all results are made available to the public promptly.
- Contingency plans must be in place to address emergency discharges, system failure and future load exceeding design capacity.
- Ongoing monitoring and work to eliminate Inflow and Infiltration into the wastewater system.
- Coastal inundation prediction maps show the wastewater treatment plant and the wastewater scheme pipe network could be under threat in the future. Solutions should be sought now while new infrastructure is being put in place.
- Consideration of a reuse network beyond the golf club to provide benefit to the wider community and alleviate chronic water shortage in Duvauchelle (for example, servicing the local public toilets in the first instance).
- Use this opportunity to further educate the community and introduce new initiatives for water conservation.

Submission #46899

Consideration of the proposed options, based on the above criteria.

FoBP supports the vision and guiding principle of the Council's *Te Wai ora o Tane, Integrated Water Strategy* that *'Water is a valued taonga, in all that we do.'*

Water supply

The Duvauchelle water supply has been restricted for many years. Over recent summers there have been extended periods of severe water restrictions, with water being brought in by tanker. This is unsustainable, both in terms of cost and, more importantly, the carbon emissions generated. While work is underway to improve the water supply, climate change may lead to even greater water shortage in the future.

Treated wastewater should be considered as a valuable resource. FoBP urges the Council to use the opportunity presented by this important infrastructure upgrade to put in place measures that will facilitate reuse in the community. The new scheme is intended to operate for many decades, so should be made 'ready' for reuse upgrade, including potable reuse should circumstances demand this in the future.

Treatment standard

The Council's 'Have your say' document is seriously deficient in that it does not explain the different treatment standards proposed and their implications.

The Beca Technical Report states (page 17) that upgraded treatment for Option 1 will reduce pathogens in accordance with accepted guidelines for public health and environmental risks.

For Option 2 it states that pathogen exposure risk is managed by managing public access.

It must also be noted that Beca (page 29) states that the scheme design must consider how a bypass/emergency discharge would operate and whether the existing outfall should be retained. Staff have advised that emergency discharge may be to the harbour or a stream.

FoBP is strongly opposed to any option that does not treat wastewater to a standard that is safe for human contact and for disposal within a community and near waterways.

FoBP wishes to express its disappointment and concern that the Council is even considering an option that does not provide for safe, modern treatment.

FoBP submits that a major upgrade to the treatment plant is overdue and is essential regardless of the disposal option selected.

Social wellbeing

The Duvauchelle golf course sits at the heart of the settlement, surrounded by local residences, businesses and community facilities including a primary school and pre-school immediately downstream, raising the risk of adverse effects on the local community. It is essential that the Duvauchelle community are fully appraised of the risks, and that these risks are properly mitigated to the satisfaction of those most affected.

Submission #46899

Option 2.

FoBP therefore strongly opposes Option 2. It cannot be seen as beneficial reuse, yet introduces risks to the Golf Club and the community. The Social wellbeing assessment as *'We see no issues'* is inadequate and does not reflect community concerns that the Council will already be well aware of through the working party and other community input, noting that the Beca Report risk assessment (appendix L) identifies midges/mosquitoes, bird attraction, odour and public objection/vandalisation as potential risks.

It is our understanding that the lower cost estimate for this option is almost entirely because there will be no upgrade to a safe, modern treatment standard. The 'Have your say' document does not explain this, or explain its statement (page 8) that option 2 *'provides a good costs-benefit analysis and offers good operational flexibility'*. FoBP submits that this statement is misleading.

Option 1.

Option 1 provides for beneficial reuse in a way that appears to be well supported by the Akaroa Golf Club. The proposed high treatment standard for the wastewater will promote public confidence in the safety of disposal within the community.

FoBP's support for Option 1 is provisional only and will be dependent on further information and detail about the scheme.

- There must be a high level of certainty in the robustness of the modelling for the scheme, particularly in relation to the capacity of the area to safely and sustainably receive the volume of wastewater and in the avoidance of run-off and nutrient build up in the soil and subsequent leaching into Pawsons stream.
- Provision for reuse in the community would provide some future-proofing against this, and also against water shortage in the area.
- The Beca Report (pages 29-32) identifies coastal erosion, sea-level rise, tsunami and extreme rainfall events as significant risks. The December 2021 rain event in the Eastern Bays has clearly demonstrated the devastating and long-lasting effects on infrastructure of such an event, which could render the land-based disposal scheme inoperative for an extended period.
The scheme will need to assess the specific vulnerabilities of both the treatment plant and the disposal sites and address these risks.
- The fire at the Bromley treatment plant also demonstrates the far-reaching effects of a disastrous event and the need to take into account potential events and effects that may have a low probability, but a high impact on the environment and resident community.
- FoBP submits that a 'Disaster Response and Recovery Plan' must be included in the operational plan and resource consent for the scheme to set out how the system would be managed in the event of a disaster.
- Impacts on, and risks to, the community must be fully addressed *to the satisfaction of the Duvauchelle community*, including midges/mosquitoes, bird attraction and odour, through appropriate design and mitigations, including sufficient setbacks from neighbouring properties, waterways and amenities.

Submission #46897

Duvauchelle Treated Wastewater Options Submission – Sue Church

Option One – This option could provide some benefit but certain criteria must be met.

The overall scheme must be:

- Climate resilient and environmentally sound at every level, providing long term scheme sustainability
- Provide the highest possible treatment standard, including U.V treatment to reassure the public in the schemes safety
- Take into account potential population growth
- Irrigation rates must be monitored to avoid a build-up of nutrients and pathogens, ensure there is no run off into nearby waterways and harbour, and avoid ponding and soil saturation
- Regular monitoring of soils, odours, pests, waterways, nearby Bay and aquatic life to ensure no build-up of nutrients and contaminants.
- Adequate buffer zones and setbacks in place to ensure no risks to both residents and waterways from irrigation spray drift
- Clear emergency plans need to be formulated to address potential scheme failure.
- Water conservation measures and education should be included as part of this proposal to both lower the wastewater schemes capacity and assist with the ongoing drinking water shortages in the Duvauchelle community

Option Two - I do not support this option.

- a. If offers no benefit, but instead introduces risk due to its lower wastewater treatment standard. It is concerning that this is even being contemplated, considered this is a public space in the middle of a residential community.
- b. The potential for contaminants and pathogens due to the lower treatment standard also means this option cannot provide any opportunity for purple pipe reuse.
- c. Irrigation of tree plantings with treated wastewater is very experimental, with virtually no data nationwide to support its success.

Other points:

- I would like to see the Council investigate potential purple pipe reuse options beyond the Golf Club, to provide benefits to the wider community.
- Sea level rise and coastal erosion must be addressed in the planning of this scheme and not left as someone else's problem in years to come.
- The wastewater pipe network must continue to be monitored, with ongoing I&I repair work carried out when needed.

Submission #46897

- Upgrades to the wastewater treatment plant need to be of a method that allow for any potential addition of a 'potable' reuse system in the future.
- As a resident of Robinsons Bay I was disappointed to see one of the Council's long list screening options included irrigating 11ha of land in our lower Valley. Although this option was not shortlisted I would like it noted that I do not support this idea, with Robinsons Bay residents already having to 'bear the brunt' of the majority of the Akaroa Wastewater Scheme in our small community.

Item 5

Attachment B

Submission #46777

Submission
BENEFICIAL REUSE Duvauchelle Wastewater
On
Akaroa Golf Club Golf Course

Introduction

There are many benefits to the reuse of the treated Duvauchelle wastewater on the Akaroa Golf Course. This submission outlines these benefits

Cultural Wellbeing

Cultural wellbeing is defined as:

The vitality that communities and individuals enjoy through:

- *participation in recreation, creative and cultural activities,*
- *and the freedom to retain, interpret and express their arts, history, heritage and traditions.*

Particular aspects relevant to the beneficial reuse of the wastewater on the golf course are:

- Recognition of the cultural importance of the Akaroa Harbour to the Ngai Tahu people and the passionate desire to remove human wastewater from that harbour
- Supporting sport and recreation for all on the Peninsula by presenting the golf course in a consistent condition for all year round play.
- Recognising and continuing the history of the original deed of sale which noted the land was to be held "in trust for recreation purposes".
- This is an innovative approach to dealing with significant cultural issues.
- This is an investment in the history and heritage of the Banks Peninsula region

Social Wellbeing

The Social Report identifies social wellbeing as being:

those aspects of life that society collectively agrees are important for a person's happiness, quality of life and welfare.

Akaroa Golf Club has for 100 years been part of the sporting environment for the Banks Peninsula people. It has received high ratings from numerous golf writers for its beauty and its challenge. Tom Hyde rates the third hole as one of the top 100 holes in New Zealand. The course rates in Golf NZ's top 2 hidden gem golf courses in Canterbury.

Submission #46777

The Club has grown from 223 members in 2016 to 264 members today. 30 of those members are junior golfers (under the age of 20). The environment is not only about golf. A typical round takes 3-4 hours for the club members. That is followed by 1.5 – 2 hours chatting, buying raffle tickets and catching up with the local news in the club house. The members are from all walks of life particularly local farmers, business owners and include bach owners from all over Canterbury. The Golf Club provides an opportunity for an eclectic group of people to mingle and socialise. Helping those that are less fortunate or sick, business opportunities or decisions, teaching new skills, fundraising for the community are just some of the outcomes of this social interaction.

The course is open 7 days a week, 52 weeks of the year for members and visitors.

The golf course assists annually for a week with the Duvauchelle Show. The Golf Club and Show committees have a close working relationship. The Club provides water to irrigate the show grounds for the week prior to the show. Club members utilise a shed on the grounds for storage of golf carts paying rent that helps with the A&P Association's costs. Some of the golf course holes are used for safe, off the main highway parking on the days before and during the show. The interaction of the two organisations connects a large majority of the Peninsula's residents.

Maintaining a healthy golf club is a key part of the social wellbeing of the Peninsula's community. This requires a healthy golf course. The irrigation with treated wastewater will assist with this.

Economic Wellbeing

The Christchurch City Council team have estimated the cost of the required works to the golf course to enable its use for the wastewater reuse as \$13.2 million.

This is the same order of cost as the other wastewater disposal (not reuse) options listed in the options chart. It is significantly less than the cost of a new 12 hole layout which was originally proposed.

The Golf Club has another role in the economic wellbeing of the Banks Peninsula community. The Club in association with the Akaroa Lions holds an annual golf tournament. Over the last 10 years that tournament has raised over \$150,000 for community projects such as the Akaroa Health Hub (twice), the Westpac Rescue Helicopter (twice), Duvauchelle Pre School, various Akaroa Primary Schools, Okains Bay Museum, and other miscellaneous local causes.

The New Year's mens' and womens' tournaments have players from all around Canterbury who travel to play in what is known as special tournaments on the annual golf calendar. These people stay in the Akaroa area and help feed into the tourist and hospitality markets.

In the last year, over 3,000 visitors have played at the course. Most of these spend the weekend and eat in the area aiding the local economy.

The Club runs raffles that purchase approximately \$20,000 of meat from the Akaroa butcher. Such a large base customer in the quieter winter months is what enables operators such as the butchery to keep their staff and survive the winter months of reduced business.

Submission #46777

Not only is the reuse of the wastewater at the Akaroa Golf Club an attractive capital cost, it also continues the significant economic role the organisation plays in the overall economic wellbeing of Banks Peninsula.

Environmental Wellbeing

Irrigation of the wastewater for the Golf Club is a REUSE of that wastewater. This reuse will enhance the golf course quality and enable a uniform overall standard for the course throughout the year.

The reuse of the wastewater on the golf course requires that water to be treated to the same level as the proposed Akaroa solution. This is to a level that will enable the wastewater to be reticulated to homes as a purple pipe solution in the future. With water predicted to be a scarce resource on the Peninsula in the future (climate change driven), treating the water to a higher level is an investment in the future. It is also a responsible response to ensuring the sustainability of the planet.

Currently the course is irrigated by water taken from the streams that run through the course. Using recycled wastewater will mean that the take from those streams will be very much reduced if not completely stopped. That in turn will increase the streams' flows and improve the streams' ecology. Those streams are home to a number of native invertebrates. Their environment will be enhanced with wastewater reuse on the golf course.

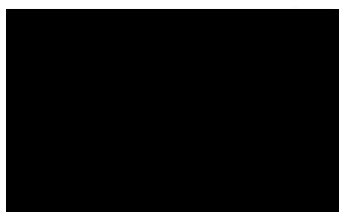
A key part of the design and proposed works on the existing course is to increase the areas of native planting. This is to provide winter irrigation areas (when the golf course pasture is wetter) and to assist in beautifying the course further (like the Wairakei Golf Club nature reserve). Native plantings will enhance the bird life on and around the golf course.

Enhancing the stream life, enhancing the bird life, increasing the areas of native planting show that the Golf Club solution is a truly environmentally beneficial reuse of the Duvauchelle treated wastewater.

Conclusion

Of the solutions proposed by the Christchurch City Council study, only wastewater reuse on the golf course creates a WIN - WIN outcome. There are benefits in all the key wellbeing measurements. The Golf Club and course are central components in the Banks Peninsula economic and social world already. With the reuse of the wastewater, the Golf Club will take a sustainable stake in the cultural and environmental wellbeing.

Let's make it happen.



Submissions received on the Duvauchelle treated wastewater options

Submissions not heard

ID	I would like to speak to the Hearings Panel about my submission	How should Duvauchelle's treated wastewater be used?	Comments	Name
46929	No	Spray and drip irrigation of Akaroa Golf Course	Please consider hooking up with local toilets to the water as this will take the pressure off the main water supply i.e. Council yard, public toilet block, Duvauchelle store.	Katrina McLeod
46926	No	Spray and drip irrigation of Akaroa Golf Course	Best long term solution that benefit all parties	Erin Shanks
46925	No	Spray and drip irrigation of Akaroa Golf Course	1. Lower treatment could lead to odour in community with NE wind being dominant wind in Duvauchelle. 2. No-go areas on golf course for public. 3. Upgrade of treatment plant to higher standard now as costs, standards, etc will be higher in later years. 4. Option 1 is the preferred option of stakeholders	Jon Clark
46923	No	Spray and drip irrigation of Akaroa Golf Course		Jacqueline Bone
46922	No	Spray and drip irrigation of Akaroa Golf Course		Robert Riodo
46921	No	Spray and drip irrigation of Akaroa Golf Course		Claire White
46920	No	Spray and drip irrigation of Akaroa Golf Course		Faye Narbey
46919	No	Spray and drip irrigation of Akaroa Golf Course		Keith Vogan
46918	No	Spray and drip irrigation of Akaroa Golf Course		Grant Dickey
46917	No	Spray and drip irrigation of		Wayne Radburnd

		Akaroa Golf Course		
46916	No	Spray and drip irrigation of Akaroa Golf Course	██████████ and support option 1 under the proposal to use Duvauchelle's wastewater on the Akaroa Golf Course, but on the proviso that any surplus wastewater is not relocated to Robinsons Bay wastewater storage and irrigation system, also proposed.	Lee Robinson
46915	No	Spray and drip irrigation of Akaroa Golf Course		Paul Mortensen
46908	No	Spray and drip irrigation of Akaroa Golf Course	Please see attached letter	Harry Stronach on behalf of the Akaroa Ratepayers and Residents Association Inc.
46907	No	Spray and drip irrigation of Akaroa Golf Course		Colleen Lapanche
46906	No	Spray and drip irrigation of Akaroa Golf Course		Aka View
46905	No	Spray and drip irrigation of Akaroa Golf Course	We now have around 32 Junior [golf] members which is the only thing for young ones on this side of the hill	Diane King
46901	No	Spray and drip irrigation of Akaroa Golf Course	Do not like the drip option and the spray irrigation could be significantly better for the golf course and surrounding neighbours. I do not like the idea of the lesser treated waste water and also believe the drip irrigation could have much higher maintenance required to keep nozzles clear. As a golf club member I see option one as the only real option.	Geoff McCabe
46900	No	Spray and drip irrigation of Akaroa Golf Course	Thankyou for the opportunity to "have our say" on the two options put up for "Duvauchelle Treated Wastewater Options". We are full-time residents in the Duvauchelle area. We favour Option 1 - spray and drip irrigate Akaroa Golf Course. The treatment and disposal of wastewater must be safe and sustainable and all risks, short and long term, to the residential adjacent communities including the Primary School and Early Learning Centre must be established and remedied before any work commences. Some direct consultation with the education facilities must take place - golfers have a choice, school children do not. I wish to make the following points: 1. The costings for the two options are not comparable - there is no costing for private land purchase or lease. 2. Option 1 purifies all the water to the standard required for public/recreational land use. Option 2 potentially purifies some of the water to that standard and some to a lower "agricultural use" standard. All wastewater for irrigation needs to be treated to a sufficiently high standard that take into account public safety, and avoids environmental impacts. 3. The use of storage tanks is supported rather than open dams/ponds. Tanks must be covered and distributed for maximum resilience and allowance for each to be isolated if required. Screen planting should be undertaken around the tanks. All wastewater must be tested and reach the standard required before being used for irrigation.	Margaret Moir

			<p>4. Irrigation rates must be monitored to prevent soil saturation or run-off. The health of the buffer vegetation and stream water quality should be stringently monitored too because there could be contaminants like nitrogen, hormones etc. that build up over time.</p> <p>5. Risks of possible insect infestation need to be investigated and mitigated if there is deemed to be even minimal risk.</p> <p>6. I am concerned about the possible volume of overflow waste water that might be released into Pawsons Valley Stream and also a proposed swale and the possible flooding risk to the School and Early Learning Centre. These threats must be adequately addressed in the final design to the satisfaction of the facilities and people affected.</p> <p>7. Finally, the treatment facility is in the tsunami zone - has this been taken note of? It does not appear that this risk has been identified and addressed. Surely this is the very first problem that has to be adequately future-proofed.</p>	
46898	No	Spray and drip irrigation of Akaroa Golf Course	I support the Friends of Banks Peninsula submission. I fully endorse their submission because they have done their homework. Years of homework. We support Option 1 as a provisional choice dependent on further information and detail about the scheme. We have opposed Option 2 due to the inferior treatment standard proposed for this option.	Hollie Hollander
46892	No	Spray and drip irrigation of Akaroa Golf Course	See attached	Paul Haglund
46891	No		See attached submission	Kate Graham on behalf of the Ministry of Education
46889	No	Spray and drip irrigation of Akaroa Golf Course		Jill Mitchell
46888	No	Spray and drip irrigation of Akaroa Golf Course		Meg Errington
46887	No	Spray and drip irrigation of Akaroa Golf Course	For health and safety, environmental reasons we totally support option 1. With the additional planting proposed this should increase the bird life also. Storage tanks far better plan than open pond areas - which would be a safety issue and attract unwanted insects and smells. Thank you for the opportunity to submit our opinion.	M + S Fairbairn
46886	No	Spray and drip irrigation of Akaroa Golf Course	Option 1 provides for the recycled water to be used for genuine benefit of the community to maintain the well-being of plants and grass on the golf course. For the sake of health and safety in the community, the recycled water must be treated	Garth Tiffen
46880	No	Spray and drip irrigation of Akaroa Golf Course	As long as waste water is highly treated so that locals are still free to use our facilities without areas being closed down due to contaminants in and on the ground. It is important that the golf course is maintained in its current state as a minimum to allow future use of this community asset.	Chrissie Jackson
46879	No	Spray and drip irrigation of	This option is preferable as it will maintain a community asset however the waste water will need to be treated sufficiently before it is used.	Paul Jackson

		Akaroa Golf Course		
46857	No	Spray and drip irrigation of Akaroa Golf Course		Tony Mason
46856	No	Spray and drip irrigation of Akaroa Golf Course	Option 1 would utilise the golf course and not involve another property such as the school, show grounds or pony club land. These longstanding community facilities need to be left alone and not taken away from their current important place in the area and used to discharge waste water.	Wendy Risdon
46854	No	Spray and drip irrigation of Akaroa Golf Course		Maria Spinks
46853	No	Spray and drip irrigation of Akaroa Golf Course		Craig Spinks
46852	No	Drip irrigation of Akaroa Golf Course and another property	Reduced capital, ongoing and storage costs. There is already a willing landowner for the council to buy or lease the land.	Julie Wagner
46851	No	Spray and drip irrigation of Akaroa Golf Course	Water will become a critically scarce resource that must be used for the greatest possible benefit of the community. Treating it to the higher standard will ensure its availability for many future uses including, as proposed in option 1, benefiting the golf club, a key community asset. Option 2 is simply a way to dispose of the water at the lowest cost with not thought as to how to get the most benefit from it. While planting native trees is environmentally beneficial, it does not require the use of this vital resource.	Garth Mitchell
46848	No	Spray and drip irrigation of Akaroa Golf Course	<p>[REDACTED] Hence I have several intersecting interests but they all point the same way.</p> <p>I would like to thank the council and staff for the work put in to the proposals. I do feel the community needs have been considered in these options.</p> <p>New Zealand has under invested in infrastructure over many decades now. Christchurch is our second largest city after Auckland. Pre-Covid population growth will return and soon. This all means more need and more funding available for public works. There is strong support for these works in cleaning up our environment. It would be a serious mistake in my view to lose the opportunity to maximise the reuse of waste water in the district.</p> <p>I support option 1 for the following reasons.</p> <p>Maximising environmental benefits</p> <ol style="list-style-type: none"> 1. The reuse of the water eliminates the golf club take from the Pawsons Valley stream 2. Native plantings on the course and not just the margins will be expanded under this option 3. Accidental or unintended spillage from the system will be safe and clean – no system can be perfect - Floods and other events cannot be completely controlled. Option 1 has much higher assurance in these events <p>Health</p> <ol style="list-style-type: none"> 1. Local children often play at the margins of the course, swimming in the stream on hot days and hunting for golf balls to sell. Drip irrigation will mean risk of contamination 	Andrew Skerrett

			<p>and health issues for these families</p> <p>2. There is higher risk for players, golf course staff and families with the drip option. Whatever the signage, some players and public day or otherwise will be tempted to get balls from less safe areas.</p> <p>Tourism</p> <p>1. The golf course can be very marginal with summer droughts. Spray irrigation will create a year round public recreational asset.</p> <p>2. Spray Irrigation future proofs the course if east coast droughts severity rises with climate change.</p> <p>3. Visitors from Christchurch, independent tourists and tours like cruise ships are all sources of players for the course.</p> <p>Community</p> <p>1. Maintaining a vibrant community living on the peninsula is important and the golf club is critical in this regard. An irrigated and native regenerating replanted course will greatly help the community.</p> <p>2. There is still considerable subdivision potential in Duvauchelle and the surrounding areas. The existence of the course will drive population growth here as retirees and those working from home seek lifestyle alternatives. We are in this category, having built our house beside the course because of the wonderful environment it offers.</p>	
46839	No	Spray and drip irrigation of Akaroa Golf Course	This option will provide the purest water and hence also provide the greatest end point use in the future.	Ian and Ruth Warren
46835	No	Spray and drip irrigation of Akaroa Golf Course		Paul de Latour
46829	No	Spray and drip irrigation of Akaroa Golf Course		Russell Fitts
46828	No	Spray and drip irrigation of Akaroa Golf Course		Richard Hawkins
46827	No	Spray and drip irrigation of Akaroa Golf Course		Chris Houston
46826	No	Spray and drip irrigation of Akaroa Golf Course		Deane Brewer
46825	No	Spray and drip irrigation of Akaroa Golf Course		Ross Smart
46824	No	Spray and drip irrigation of		Richard Craw

		Akaroa Golf Course		
46823	No	Spray and drip irrigation of Akaroa Golf Course		Michael Regan
46822	No	Spray and drip irrigation of Akaroa Golf Course		Grant Robertson
46821	No	Spray and drip irrigation of Akaroa Golf Course		Mike Williams
46820	No	Spray and drip irrigation of Akaroa Golf Course		Chris Reid
46819	No	Spray and drip irrigation of Akaroa Golf Course		Frank McMaster
46818	No	Spray and drip irrigation of Akaroa Golf Course		Simon Hadfield
46817	No	Spray and drip irrigation of Akaroa Golf Course	I support option one as I believe it is the best solution to the long term wastewater treatment for Duvauchelle	Henry Jones
46816	No	Spray and drip irrigation of Akaroa Golf Course		JM Clark
46815	No	Spray and drip irrigation of Akaroa Golf Course		Rob Berry
46814	No	Spray and drip irrigation of Akaroa Golf Course	I want the waste treated to the highest standard possible	Hugh Flaus
46813	No	Spray and drip irrigation of Akaroa Golf Course		FM Anderson
46812	No	Spray and drip irrigation of		Peter Guthrey

		Akaroa Golf Course		
46811	No	Spray and drip irrigation of Akaroa Golf Course		Diane Webster
46810	No	Spray and drip irrigation of Akaroa Golf Course	1. For the health and safety of the golf club and wider community, it is essential that the recycled wastewater is treated to a notable standard. 2. Option one is the only genuine beneficial reuse of treated wastewater	Robin Tiffin
46809	No	Spray and drip irrigation of Akaroa Golf Course	The wastewater must be treated to the HIGHEST level possible	Gaye van Tulder
46808	No	Spray and drip irrigation of Akaroa Golf Course	I am strongly in favour of the option to spray and drip irrigate the Akaroa Golf Course particularly as 1. it will result in less demand on the existing water systems 2. Akaroa needs/benefits from having an 18 hole golf course as part of its holiday destination/tourism reputation	Nic Parker
46807	No	Spray and drip irrigation of Akaroa Golf Course		Bernie Rennell
46804	No	Spray and drip irrigation of Akaroa Golf Course		Lydia Schurgers
46802	No	Spray and drip irrigation of Akaroa Golf Course	Option 1 - looks after the whole Duvauchelle Community. New houses are still being built - the Wastewater Treatment Plant needs upgrading to future proof our Community. What a great innovation the CCC will be agreeing to use recycled water to enhance a Green space. By going with Option 1 you are also allowing other Community Groups (including the APM Show & Pony Club) to retain the Grounds they use that could otherwise be required for the purpose	Fiona Barnes
46801	No	Spray and drip irrigation of Akaroa Golf Course	Option 1 is the most appropriate as it is future proofing the Treatment Plant. It is also a very beneficial use of recycled water. The Golf Course will then not be drawing during the dry Summer months precious water from the Pawsons Valley Stream. The Golf Course is such a great community asset. A lot of Farmers play Golf making great friendships which helps with their work life balance including their mental health	Owen Barnes
46798	No	Drip irrigation of Akaroa Golf Course and another property	The golf club can pay if they want irrigation. The Golf club should be reclaimed as forest it is a waste of space for such a small rich membership.	Alex Neiman
46797	No	Drip irrigation of Akaroa Golf Course and another property	Cheaper capital cost Cheaper to run Sequesters more carbon	John and Loraine Somerville
46794	No	Spray and drip irrigation of Akaroa Golf Course		Bernie Schrader

46792	No	Spray and drip irrigation of Akaroa Golf Course	Option 1. The Akaroa Golf course is a major asset to the community and visitors to Banks Peninsula. In choosing Option 1, the plan will retain the 18 holes. Option 2 does not name the position of the the extra land which would need to be purchased. The existing water treatment plant upgrade to meet all public health requirements with the drainage and irrigation plans as drawn up, should mitigate any perceived concerns that neighbouring properties may have.	Sandra Innes
46791	No	Spray and drip irrigation of Akaroa Golf Course	Without a major upgrade of the treatment plant it is likely heavy metals could be placed over the irrigation area(s) which would lead to potential health hazards to people (or amaniats) using such irrigation disposal areas.	Ian Le Page
46788	No	Spray and drip irrigation of Akaroa Golf Course		Dave Denham
46785	No	Spray and drip irrigation of Akaroa Golf Course	Don't know the other property	Robert TAYLOR
46784	No	Spray and drip irrigation of Akaroa Golf Course	We think this is the best option	RINA TAYLOR
46783	No	Spray and drip irrigation of Akaroa Golf Course		Rodger Montgomery
46782	No	Spray and drip irrigation of Akaroa Golf Course	Will improve golf course greens, what the golfers want.	Charlotte Osborne
46781	No	Spray and drip irrigation of Akaroa Golf Course	I believe spray and drip irrigation of the golf course is the best strategy. I hope all care and consideration are taken to ensure the water is exactly as it should so there's no smell noticed by neighboring properties.	Bevan McGibbon
46780	No	Spray and drip irrigation of Akaroa Golf Course	See attached submission for further detail.	Cassie Welch on behalf of Te Poari Hauora ō Waitaha Canterbury District Health Board
46779	No	Spray and drip irrigation of Akaroa Golf Course		Chris Simcock
46778	No	Spray and drip irrigation of Akaroa Golf Course	It is better to treat the water to a higher level before it is applied to a public space.	James Anderson
46776	No	Spray and drip irrigation of		Christina Neil

		Akaroa Golf Course		
46774	No	Spray and drip irrigation of Akaroa Golf Course	<p>[REDACTED], I totally support Option 1. I believe the long term benefits of re-using the treated waste water to enhance one of New Zealand's most picturesque golf attractions, and the local ecology, will out-weigh the short term costs. A successful scheme will show the rest of New Zealand the way forward for environmental management.</p>	Robert Doole
46772	No	Spray and drip irrigation of Akaroa Golf Course	<p>As a resident of Duvauchelle area and user of the waste water system and also a [REDACTED] we wish to support Option-1 as a solution to the area's waste water disposal.
</p> <p>This support is on the provision the treated water meets and exceeds the International standard that any area used for the disposal of waste water has no effect on the health and wellbeing of people using the recreational area the treated water is spread on.
</p> <p>As the land area belongs to the CCC and leased to the Golf club the Option-1 solution solves an issue in the environmental disposal of waste water without additional capital land costs for CCC and provides for improved land area for the Akaroa Golf Club.</p>	John Petrie
46770	No	Spray and drip irrigation of Akaroa Golf Course		Rachael Court
46769	No	Spray and drip irrigation of Akaroa Golf Course		Simon Davis
46768	No	Drip irrigation of Akaroa Golf Course and another property	<p>I do believe that the Duvauchelle's Rate payers should get say two or three votes for their say. Everyone else should only get one vote. (Non Duvauchelle's ratepayers.)</p> <p>I live in Le Bons Bay and routinely work in the Duvauchelle's area.</p> <p>The general consensus of opinion for all the Banks Peninsula area is to have minimal footprint. Perhaps its time to bring back composting toilets (ie Aquatron Systems) for a lot of properties.</p> <p>Oasis Clearwater would also be a possible solution. Even septic tanks may do.</p> <p>Like the transformation of fires in Christchurch, Banks Peninsula needs to transform its Rural sewage disposal to a more self-contained resolve.</p> <p>Think outside the square !</p>	Tony Hall
46767	No	Spray and drip irrigation of Akaroa Golf Course		John Kelland
46766	No	Spray and drip irrigation of Akaroa Golf Course	Only option is to have the water of a high standard	Sue Kerr
46765	No	Spray and drip irrigation of Akaroa Golf Course		Ross Lindsay
46764	No	Spray and drip irrigation of Akaroa Golf Course	Waste water must be treated to a very high standard.	Greville Walsh

46762	No	Spray and drip irrigation of Akaroa Golf Course	Option one is future proofed and presents an environmental and practical benefit Well done reducing it to two clear precise options.	Keith Shipston
46761	No	Spray and drip irrigation of Akaroa Golf Course	Good decision	Denise Langrope
46759	No	Spray and drip irrigation of Akaroa Golf Course	This will add benefit to the golf course and keep it safe too.	Merrick Brown
46758	No	Spray and drip irrigation of Akaroa Golf Course	Prefer this option as it provides upgrades - future proofing!!!	Stephany Anderson
46757	No	Spray and drip irrigation of Akaroa Golf Course	The upgrade to the Duvauchelle Waste Water system would be beneficial to the community	Chris Muirhead
46672	No	Spray and drip irrigation of Akaroa Golf Course		Paulette Hazeldine
46671	No	Drip irrigation of Akaroa Golf Course and another property	Cheaper for the rate payers	Fran Rae
46668	No	Spray and drip irrigation of Akaroa Golf Course	After reading through these options I find there is only one to consider,option 1 ticks all the boxes for me I cannot see the sense in going to option 2 to save a small amount of money in the big picture.I think this is a win win for the council,the residents and the golf club.	Kevin Kerr
46628	No	Spray and drip irrigation of Akaroa Golf Course	I believe the spray and drip at the golf club is by far the best option!!!	Ross Christie
46536	No	Drip irrigation of Akaroa Golf Course and another property		Ian & Pauline Stevens
46532	No	Spray and drip irrigation of Akaroa Golf Course		Megan Smith
46517	No	Spray and drip irrigation of Akaroa Golf Course	Using the effluent to water the whole golf course is better because it uses water more wisely. In the future we may not have the luxury of pumping ground water to keep the grass green. Its better to use all the treated water, all year round. A great solution that will help with future problems.	Russell Deeming

46510	No	Spray and drip irrigation of Akaroa Golf Course	Preference must be given to Option 1 which will be the best method of irrigating the golf course all year around. In addition and very importantly for health reasons it must be fully treated water sprayed and dripped on to the course.	Kay Lindsey
46508	No	Spray and drip irrigation of Akaroa Golf Course	Let's support the golf club. As it adds to the attractions available to residents and tourists visiting the area.	William Steel
46507	No	Spray and drip irrigation of Akaroa Golf Course	It's a no brainer. Use all of the waste water treated at a higher safe level on the existing golf course. Not fully treating the waste water and only watering the margins as I understand it would mean that these margins would be off limits due to health risks. Have you ever tried to keep a golfer from finding his favorite ball. Not to mention an increase in young people using the course both for golf and as an unofficial play ground. This would be an unacceptable health risk to all involved that would be nigh on impossible to police and open both the golf club and the council to the possibility of lawsuits. While unlikely for the sake of a few extra dollars lets do the job properly to a high standard and do it once unlike the water treatment plant which is near useless for purpose. Do it once Do it right	John Yagodzinski
46504	No	Spray and drip irrigation of Akaroa Golf Course	I believe waste water MUST be treated to the higher standard to be released across reserves and the golf course	Peter Steel
46356	No	Spray and drip irrigation of Akaroa Golf Course		Nicholas Latham
46262	No	Spray and drip irrigation of Akaroa Golf Course	I support option 1 on the information provided as it appears to be the most robust solution, however it would be helpful if some indication on the effect on rates is likely between the two options. Also the presentation is silent on the BC of option 1 with regard to the reduction of water from the supply used for the Duvauchelle area. Given the problem with water in the area it could be expected to help offset the higher cost of option 1.	John Haugh
46219	No	Spray and drip irrigation of Akaroa Golf Course	I know how wet the golf course can get so my only concern would be a lot of rain after irrigation and sewage (treated) going into the harbour via the streams. Even maybe possible from option 2.	James & Dorothy Parry
46211	No	Drip irrigation of Akaroa Golf Course and another property	Option 1 is best as currently presented. Option 2 could be better if there were a property able to support native revegetation (nursery opportunity perhaps) and I think this needs to be explored before settling on the costlier, easier option.	Tia Matchitt
46169	No	Spray and drip irrigation of Akaroa Golf Course		Karen Cone
46168	No	Spray and drip irrigation of Akaroa Golf Course		Darryl Cone
46158	No	Spray and drip irrigation of	While it is not favorable that akaroas wastewater is to become duvauchelles problem. At least the golf course an stay greener with extra watering	A Cairns

		Akaroa Golf Course		
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Submission #46908

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Akaroa Ratepayers and Residents Association Inc

To: Christchurch City Council
PO Box 73016
Christchurch 8154

Date: 7 June 2022

Attn: Hannah Ballantyne, 

SUBMISSION REGARDING DUVAUCHELLE WASTEWATER PROJECT

The Akaroa Ratepayers and Residents Association is an Incorporated Society that has been established to promote the interest and wellbeing of the community in the Akaroa area. This submission is made on behalf of the members of this organisation, and we believe this also represents the general interests of the wider community. This submission has been prepared by Harry Stronach, the President of the Society. We do not wish to be heard in support of this submission.

Key Points

It is clear that there is an existing shortage of potable water in the Banks Peninsula area. This shortage is likely to become more severe in future years due to the effects of climate change and population growth.

We believe that the only sensible long-term strategy must be to treat wastewater to potable standard, and to re-use that resource within the supply system. Any proposals to handle wastewater in the shorter term, such as those currently being proposed for the Duvauchelle system, must be arranged with consideration to ultimately achieving the long-term objective of potable-standard treatment and re-use.

We also believe that any options to irrigate to land must be soundly engineered, and must avoid any public health risk, and maximise beneficial re-use to the greatest possible extent.

Of the two options that have been proposed by CCC, it is clear that Option 1 (Spray and drip irrigate Akaroa Golf Course) is preferred, and that option is strongly supported by this Society.

As a ratepayer-based organisation we closely scrutinize council expenditure, and tend to favour lower cost options. However, for this particular project we believe that the higher cost of Option 1 is fully justified, due to the reduction in health risks, the beneficial re-use aspects, and as a logical step towards future treatment to potable standard.

Submission by



Harry Stronach (President, Akaroa Ratepayers and Residents Association Inc)

Submission #46892

Duvauchelle Treated Wastewater Options

[REDACTED]

Over that period I have witnessed various water supply systems, plus sewerage systems from a "Long drop" to "Septic Tank" to the current "Sewerage Scheme". The Wastewater Treatment Plant and Water Supply Systems installed in the 1980's at a cost of \$6,000 to property owners, was to solve all but storm water problems in the Bay. This meant that both, local water and septic tank systems were replaced and provision for future needs met.

Obviously the population has outgrown the supply (or resources) available, plus the need to meet the restriction of discharging wastewater into Akaroa Harbour.

I have been extremely interested in the various proposals for the Duvauchelle wastewater and believe the two options submitted for consideration are in my opinion sensible solutions.

Whilst the documentation doesn't disclose where the storage tanks will be located, I imagine they would need to be at the top of the Golf Course. Location at the source of the treatment (pump station), would be extremely risky, with the foreseeable "Global Warming" and raising of sea levels.

No doubt those involved in the planning, will be well aware of the very high water table in the lower part of Pawsons Valley, with this issue featuring in the Akaroa Mail as far back as in the late 1800's. So this would lead to my first concern.

Concern 1. Is it likely that the regular irrigation would increase the water table lower in the Valley?

Concern 2. Should the "Storage Tanks" reach their capacity during the winter months or extended wet periods, what effect will this have with the need to discharge the content?

Although I appreciate the opportunity is to give feedback on the Duvauchelle wastewater, for me the "Fresh Water" or water supply is equally, or more important. This resource is certainly limited and the current supply cannot meet the growing demand.

Should the proposal of irrigating the Akaroa Golf Course with the wastewater proceed, as indicated, this will significantly reduce the water taken from the Pawsons Valley Stream. Therefore consideration should be given to use that allocation to increase the input of water to the Water Supply at the Duvauchelle Cemetery. Although the intake would need to be higher up the valley, the majority of pipeline could be incorporated in the same trench as the proposed wastewater pipe line, which would be a win-win situation.

As a long time family resident of Ducauchelle, I have indicated that I fully support **Option 1 "Spray and drip irrigate Akaroa Golf Course"**, but would also suggest that Council give full and careful consideration to the fresh water supply that is extremely necessary for the local community.

Thank you for the opportunity to express my views and I trust the content is of some value. I wish the "Wastewater Working Party" every success in resolving an issue which will overcome the present and future demands.

[REDACTED]

Item 5

Attachment C

Sensitivity: General

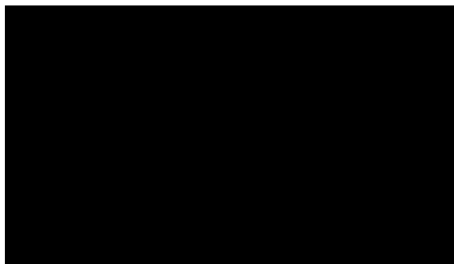
Submission #46891



Feedback on the Duvauchelle Wastewater Treatment Plan

To: Christchurch City Council (CCC)

Name of submitter: Ministry of Education Te Tāhuhu o Te Mātauranga ('the Ministry')



This is feedback on the Duvauchelle Wastewater Treatment Plan.

Background

Thank you for the opportunity to provide feedback on the Duvauchelle Wastewater Treatment Plan. The Ministry of Education (the Ministry) is the Government's lead advisor on the New Zealand education system, shaping direction for education agencies and providers and contributing to the Government's goals for education. The Ministry assesses population changes, school roll fluctuations and other trends and challenges impacting on education provision at all levels of the education network to identify changing needs within the network so the Ministry can respond effectively.

The Ministry has responsibility not only for all State schools owned by the Crown, but also those State schools that are not owned by the Crown, such as designated character schools and State integrated schools. For the Crown owned State school this involves managing the existing property portfolio, upgrading and improving the portfolio, purchasing and constructing new property to meet increased demand, identifying and disposing of surplus State school sector property and managing teacher and caretaker housing.

The Ministry is therefore a considerable stakeholder in terms of activities that may impact on existing and future educational facilities and assets in the Christchurch District, including Banks Peninsula.

The Ministry feedback contained within this letter represents both its own position and the concerns raised by Duvauchelle School and supported by Banks Peninsula Early Learning Centre

The Ministry's feedback is:

The Ministry has a particular interest in proposals that, either directly or indirectly, have the potential to impact on the Ministry's interests such as the management and operation of existing educational facilities or the establishment of new educational facilities. First and foremost, the Ministry commends Council for considering alternative options to the current scheme of discharging treated wastewater to the Akaroa harbour.

It is acknowledged that Council have undertaken an options analysis assessment to date, including preliminary consultation with Akaroa Golf Club, the Duvauchelle Wastewater Working Party and Ngāi

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Tahu. It is understood that no consultation with the Ministry, Duvauchelle School or the Banks Peninsula Early Learning Centre has been undertaken.

The Ministry understands that the two options for the treated wastewater discharge are:

Option 1 - Spray and drip irrigate Akaroa Golf Course. Irrigate wastewater onto trees, greens and fairways of the existing 18-hole golf course during summer. Irrigate planted course margins the area uphill of the golf course in winter. It has been noted that this is Council's preferred option.

Option 2 - Irrigate Akaroa Golf Course 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.

The concerns to the Ministry, relate to aerosol contamination and waterway contamination, particularly given Duvauchelle School and Banks Peninsula Early Learning Centre are immediately adjacent to Akaroa Golf Course. The Ministry has engaged with Duvauchelle School and Banks Peninsula Early Learning Centre prior to preparing this feedback. The concerns raised by Duvauchelle School and supported by the Banks Peninsula Early Learning Centre are summarised below:

- The impact on the health of Pawsons Valley Stream, immediately adjacent to Akaroa Golf Course and Duvauchelle School.
- Aerosol contamination – particularly during the summer months.
- Odour and the potential adverse effects associated with this on the tamariki on the school grounds.

The Ministry acknowledges the need to manage wastewater discharge safely and efficiently within Banks Peninsula, however the Ministry has an obligation to continue to provide safe educational facilities.

Whilst it is acknowledged that no consents have been sought yet, therefore monitoring and operational conditions have not been proposed or considered, the Ministry seeks further clarification on how potential and actual effects on Duvauchelle School, the Banks Peninsula Early Learning Centre and the tamariki and staff will be mitigated.

The Ministry seeks the following from Christchurch City Council:

The Ministry requests that the Duvauchelle wastewater treatment plan, regardless of which option is pursued, should only proceed if the following matters are addressed:

- The actual and potential effects associated with aerosol contamination and odour on Duvauchelle School and Banks Peninsula Early Learning Centre, are mitigated, if not avoided, through robust conditions and management plans.
- The applicant provides specific information on the potential and actual overflow and flooding effects on the Duvauchelle School.
- Engagement with the Ministry, Duvauchelle School and the Banks Peninsula Early Learning Centre is undertaken throughout the process.

The Ministry contact person for asset planning is Stuart Graham. Contact details for Stuart are:



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Sensitivity: General

Submission #46891



Kate Graham
Planner – Beca Ltd
(Consultant to the Ministry of Education)
Date: 31 May 2022

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Attachment C

Submission #46780

Canterbury

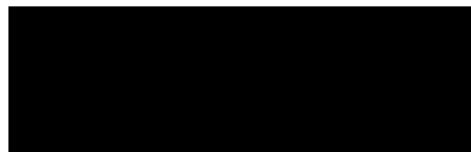
District Health Board

Te Poari Hauora ō Waitaha

Submission on Duvauchelle Treated Wastewater Options

To: Christchurch City Council

Submitter: Canterbury District Health Board



Proposal: The CCC are looking at ways to improve the way CCC manage treated wastewater at Duvauchelle. The CCC consent to discharge treated wastewater to Akaroa Harbour is expiring and we are unlikely to get a new consent to continue this practice if there are viable land-based disposal alternatives. The CCC has budgeted \$14.4 million for this project, which will include upgrading the Duvauchelle Wastewater Treatment Plant.

There are two options to consider.

Option 1: Spray and drip irrigate Akaroa Golf Course

Option 2: Drip irrigate Akaroa Golf Course and another property

Submission #46780

SUBMISSION ON DUVAUCHELLE TREATED WASTEWATER OPTIONS

Details of submitter

1. Canterbury District Health Board (CDHB).
2. The submitter is responsible for promoting the reduction of adverse environmental effects on the health of people and communities and to improve, promote and protect their health pursuant to the New Zealand Public Health and Disability Act 2000 and the Health Act 1956. These statutory obligations are the responsibility of the Ministry of Health and, in the Canterbury District, are carried out under contract by Community and Public Health under Crown funding agreements on behalf of the Canterbury District Health Board.
3. The Ministry of Health requires the submitter to reduce potential health risks by such means as submissions to ensure the public health significance of potential adverse effects are adequately considered during policy development.

Details of submission

4. We welcome the opportunity to comment on the Duvauchelle Treated Wastewater Options.
5. While health care services are an important determinant of health, health is also influenced by a wide range of factors beyond the health sector. Health care services manage disease and trauma and are an important determinant of health outcomes. However, health creation and wellbeing (overall quality of life) is influenced by a wide range of factors beyond the health sector.
6. These influences can be described as the conditions in which people are born, grow, live, work and age, and are impacted by environmental, social and behavioural factors. They are often referred to as the 'social determinants of health'¹.

¹ Public Health Advisory Committee. 2004. *The Health of People and Communities. A Way Forward: Public Policy and the Economic Determinants of Health*. Public Health Advisory Committee: Wellington.

Submission #46780

General comments

7. The CDHB supports both options discussed for Duvauchelle Wastewater Treatment Plant, with a preference for Option 1. Both options are acceptable, as they both prevent discharge to Akaroa Harbour, however Option 1 is simple to implement, supported by Ngāi Tahu and the Akaroa Golf Course, and has the additional benefit of reducing water use from the stream for irrigation of the golf course.
8. The CDHB commends the Christchurch City Council for their work with Ngāi Tahu and Akaroa Golf Course in developing culturally and environmentally acceptable solutions.
9. The CDHB notes that both options clearly follow the commitment and guidance of the Christchurch City Council's Te Wai ora o Tāne Integrated Water Strategy². Both options outlined for the treatment plant are protecting the ecosystems of the harbour and therefore the wellbeing and health of Ngāi Tahu and the wider community living around Akaroa Harbour.

Conclusion

10. The CDHB does not wish to be heard in support of this submission.
11. If others make a similar submission, the submitter will not consider presenting a joint case with them at the hearing.
12. Thank you for the opportunity to submit on Duvauchelle Treated Wastewater Options.

Person making the submission



Dr Anna Stevenson
Public Health Physician
Medical Officer of Health

Date: 24/05/2022

² Christchurch City Council. (2019). Te Wai Ora o Tāne Integrated Water Strategy. Christchurch, NZ: Christchurch City Council: <https://ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Strategies/Integrated-water-strategy.pdf>
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6. Hearing of Submissions Ngā Tāpaetanga

Submitters who indicated that they wished to be heard in person will present to the Hearings Panel. A schedule of presenters can be found at the beginning of the Volume of *“Heard Submissions”*.

7. Consideration and Deliberations Ngā Whaiwhakaaro me Ngā Taukume o Ngā Kōrero

At the conclusion of submitters being heard, the Hearings Panel will consider all submissions received on the proposal, and any additional information provided by submitters and Council Officers. The Hearings Panel will then deliberate on the proposal.

8. Hearings Panel Recommendations Ngā Tūtohu o Te Tira Tauaki

At the conclusion of deliberations the Hearings Panel will make a recommendation on the Duvauchelle treated wastewater options to the Council.