

# Akaroa Reclaimed Water and Reuse Scheme Community Reference Group Commentary

- A key step in addressing Community concerns and improving the Scheme.

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## **Background**

The Akaroa Reclaimed Water and Reuse Scheme is the largest Infrastructure project for Akaroa and surrounding areas in the history of the area. It has been a long time in its creation, starting with a council resolution in 2011 to replace the existing sewerage treatment plant at Takapūneke.

Major factors contributing to the decision to replace the treatment plant were its age, the location of the plant on land that is sacred to local iwi, and that Ōnuku Rūnanga had long been advocating for an end to the disposal of human waste into the harbour as it was culturally and spiritually affronting. In 2011 Christchurch City Council resolved to build a new treatment plant at Old Coach Road. Consents were granted in 2015 for the treatment plant and a new terminal pump station in the Childrens Bay boat park. The proposed harbour discharge consents were not granted. Council needed to find another way to dispose of Akaroa's treated wastewater. Complicating the issue was the very limited availability of land suitable for the disposal of Akaroa's wastewater.

In August 2020, Council consulted with the community on four options for the disposal / reuse of treated wastewater. This followed five years of options investigations and consultation. The process included a number of setbacks; after public consultation in 2015 slope stability issues were further investigated which limited some irrigation sites that had been identified, an outcome of this was that irrigation to land options over a wider area around Akaroa were considered. After consultation in 2017 a faulty flowmeter was identified and an outcome of the flowmeter issue was that sewerage flows were greater than previously thought with a significant portion of this volume being inflow and infiltration into the sewerage pipes within the Akaroa township

The issues and concerns of the affected communities of Akaroa, Takamātua and Robinsons Bay were identified through the 2015 and 2017 submission processes, the Akaroa Treated Re-Use Options Wastewater Working Party which met from February 2017 to June 2020, and the submissions made to the 2020 consultation.

The Council resolved on 10 December 2020 to use the highly treated wastewater to irrigate plantings of native trees in Robinsons Bay, Hammond Point and Takamātua (also known as the Inner Bays Irrigation scheme). The option also included a covered raw wastewater storage pond, a wetland, and a treated water storage pond on land opposite the proposed treatment plant on Old Coach Road, with the bulk of the treated water storage in Robinsons Bay. The resolution also reflected many of the concerns raised by the community and requested further investigations and actions on a range of matters.

A major concern of Robinsons Bay residents was the proposed construction of two large wastewater storage ponds that would be close to existing residences in their Valley. The 2020 resolution called for alternative storage options to be explored.

The Council resolved to establish a Community Reference Group to ensure the communities were engaged with Council Staff in the design and development of the project before being submitted for consent. A group was established with Community Members, Community Board members, Ōnuku Rūnanga representatives and Council Wastewater project staff members, and met in the latter half of 2021. The Terms of Reference for this group was to focus on the proposed irrigation and wastewater storage sites at Robinsons Bay, Hammond Point and Takamātua, along with a constructed wetland between Old Coach Road and Christchurch Akaroa Highway.

The Terms of Reference did not extend to consideration of alternative disposal locations.

### **Terms of Reference Objectives**

- To assist the project team to develop the preliminary design of the Akaroa Reclaimed Water and Reuse Scheme in a way that addresses community concerns where possible.

- To suggest ways that the Akaroa Reclaimed Water and Reuse Scheme could be improved so that it can deliver multiple benefits for the community in the geographic areas considered.

The Community Reference Group members are

- Sue Church                      Community Member
- John Curry                      Community Member
- Chris McGill                    Community Member
- Averil Parthonnaud          Community Member
- Ad Sintenie                    Community Member
- Debbie Tikao                  Rūnanga Representative
- Rik Tainui                      Rūnanga Representative
- Jamie Stewart                Community Board Member
- Nigel Harrison                Community Board Member

The five community members were chosen by the Banks Peninsula Community Board from applicants who responded to the Council's advertisement for the voluntary positions.

### **Process and Meetings**

The Community Reference Group was chaired by an independent facilitator, Carl Pascoe of Creative Facilitation Network Ltd. Five meetings were held between the 23<sup>rd</sup> of September 2021 and the 17<sup>th</sup> of February 2022. Key CCC project staff, Kylie Hills, Mike Bourke, and the project sponsor John Filsell were fully engaged with the group, providing input to, and including feedback from the Group into the project.

### **Community Reference Group Principles**

The Akaroa Reclaimed Water and Reuse Scheme must be safe, sustainable, resilient, and take into account the risks and uncertainties of climate change.

Each facet of the project must be designed to avoid, or minimise, adverse effects on the environment, historical sites and affected communities, specifically Robinsons Bay and Takamātua.

To provide for public access and enjoyment where appropriate, particularly where this will further aims for a link from Takapūneke through to Robinsons Bay, and to honour and preserve the histories of both Tangata whenua and European settlers through narrative interpretations.

That the community has advocated for wastewater reduction, reuse, and purple pipe initiatives, with the hope that this can become an exemplar for other communities in Aotearoa.

### **Community Reference Group Members contribution:**

The Community Reference Group meetings involved presentations by CCC staff on the design of the scheme, with opportunity for discussion and feedback. A significant change to the initial proposed design was the location of the water storage in Robinsons Bay and the method of storage. Instead of the two large wastewater ponds being located low in the valley near to houses, the reclaimed water would be stored higher up the valley in large water tanks. The group members felt that this was a much preferable design solution that would resolve the risks of storage in open dams for Robinsons Bay residents.

Project staff also updated the group on progress in reducing the problem of inflow and infiltration of the sewage pipes within Akaroa. Over the past year the Council has made good progress in repairing the existing sewage pipes to reduce the amount of additional water entering the sewage system. This in turn reduces the volume of wastewater that needs to be treated, stored, and disposed of. Another significant source of water into the wastewater system that is being addressed is the wastewater from the filtration

process at the L'aube Hill water treatment plant. Council staff estimate that flush water from the filtration process can be reduced from around 15% percent down to around 5%.

### **Response to Objective 1.1 - Concerns expressed by members were:**

Impacts on residents and their communities, including the safety and enjoyment of their properties, and on the environment of the valleys and bays.

Impacts of the large storage scheme in Robinsons Bay. Impacts of the disposal scheme on land and water bodies from contaminants, and continuing over decades.

Aspirational recreation goals, while welcome, do not in themselves resolve concerns or mitigate potential impacts for the receiving communities.

The key matters that were discussed and progressed by the Community Reference Group are:

#### **1 Storage in covered tanks, not open dams**

It was found that storage in multiple covered tanks away from the Robinsons Valley floor is a feasible option. This option is more acceptable to the community as it mitigates the risks of dam break, odour, insects, and visual impacts. It also prevents rainwater from adding to the water volume to be irrigated.

The 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, and with suitable screening planting to reduce visual impact.

#### **2 Wastewater Quality, Maintenance and Monitoring**

All wastewater for irrigation and purple pipe re-use needs to be treated to a standard, including UV treatment, that will avoid environmental impacts, ensure public safety and promote public confidence in re-use initiatives.

Some members requested holding tanks at the treatment site so that the results of testing would be available before the treated water is distributed enabling it to be re-processed if it does not meet the required standards.

Members made a range of monitoring requests, seeking to ensure that:

- Irrigation rates avoid soil saturation, ponding and run-off,
- Nitrogen, phosphates, pharmaceuticals, heavy metals and other contaminants are not building 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 being affected,
- There is effective pest control for possum, rats, mustelids and browsing animals,
- Trees are in good health and canopy growth is assessed against modelled parameters,
- There is no build-up of odour or insect pests,

Consent conditions should 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.

#### **3 Private Water Supplies affected are provided with a safe and adequate new supply**

#### **4 Preservation and Protection of the Robinsons Bay Sawmill Heritage Site**

Land purchased by the Council for the irrigation scheme includes an area beside and behind the Pavitt Cottage stretching up to the Wynn Williams Cottage which has immense historic and archaeological importance.

The group discussed a range of possible options to achieve this. These included dividing off the area as a Reserve, Council leasing the area to a community group, or gifting the land to a community charitable trust.

#### **5 On-going need to reduce wastewater volume**

Council has made good progress over the past year in identifying and repairing the sewer network to reduce Inflow and Infiltration, and in identifying and reducing retentate from the Akaroa water supply. This is essential to reduce the volume of wastewater to meet the scheme's capacity. Continuing efforts to minimise volume in all practicable ways will help to ensure that the scheme remains sustainable in the face of climate uncertainty. Member's suggestions included:

- On-going work to eliminate Inflow and Infiltration into the wastewater system
- Wastewater to be made available to properties along the pipe route.
- Creative, effective promotion of water conservation and waste reduction measures in Akaroa, with on-going budgets for this.

#### **6 Commitment to furthering a purple pipe network in Akaroa**

Commitment to furthering re-use and a purple pipe network in Akaroa, including time-lines and budget for this.

#### **7 Plantings must ensure scheme resilience.**

Plants selected must be suitable for the soil and conditions of each site as well as for the application of the wastewater, and take into account fire risk. Members also wanted to see mixed planting used to maximise biodiversity benefits.

#### **8 Contingency plans in place as part of the consent to address system failure, or load exceeding design capacity**

#### **9 Some members were concerned that Duvauchelle wastewater might be added to the Akaroa Scheme in the future.**

## **Response to Objective 1.2 - Delivery of multiple benefits to affected areas**

One concept that evolved during the Community Reference Group meetings was the potential to integrate the Akaroa Reclaimed and Reuse Water Scheme into an overall Harbour development plan. The Scheme will result in new areas of native bush being established at Takamātua, Hammond Point, and Robinsons Bay. The Community Reference Group members supported the establishment of walkways and recreation areas for public access and use. This would contribute toward achieving the CCC Public Open Space Strategy goal for an Akaroa Harbour Coastal Path.

There is potential to link Akaroa with the Old Coach Road site, then Old French Road to Takamātua, and use paper roads to connect with Hammonds Point, the DoC reserve and the area being reforested by students from Akaroa Area School. This could then link with Robinsons Bay walkways.

While recognising that Council ownership of land acquired for the wastewater scheme has the potential to provide new recreational opportunities, some issues were raised:

- The priority for the scheme should be safety and resilience. Funding for recreational development should not divert from these priorities.
- There needs to be a defined budget for recreation
- How recreational infrastructure created through the wastewater project is to be maintained and who will take responsibility for it
- The remit of the wastewater project does not extend beyond the wastewater sites and could therefore only be a very small part of the recreational ideas that have been put forward at the Reference Group meetings.

The aspirations listed below are those that could be achieved on the sites and in conjunction with construction of wastewater infrastructure.

### **1 Upper Robinsons Bay Site**

Sawmill heritage and archaeological features (including the historic Wynn Williams Cottage) subdivided and appropriately fenced from the wastewater scheme and gifted to a community Charitable Trust with provision for public access and appreciation.

Reclaim heritage materials onsite, such as tōtara posts, to be re-used for fencing or donated to the Community Trust for use in the historic area.

Track network to enable public access on the remainder of the site.

Upper part of the property not used for irrigation to be retained for biodiversity and public access.

Keep the remainder of the tramway embankment that runs through the irrigation field clear of trees for walking access.

### **2 Hammond Point Site**

Construct a walking track linking from the Robinsons Bay Wharf over the headland to Sandy Bay at Takamātua. Connect from top of Hammond Point to the DOC Reserve at the tip of the Peninsula.

Create a seating/lookout area looking across the harbour to Ōnawe Peninsula and Harbour bays, with an interpretation panel of the surrounding features and cultural histories and an information QR code.

### **3 Takamātua Flats**

If the seaward side of the road is acquired, retain this as a coastal protection area and develop it to maximise benefits to the waterway and to provide a sea level rise buffer to the main highway. This could

include a coastal forest (nikau and ngaio), podocarp forest (kahikatea, tōtara, matai) and Harakeke harvesting area. A boardwalk /track could link with Old French Road and Takamātua Bay through to Hammond Point.

Upper side of the road – ensure acceptable setback from Thurston’s property, partially retaining their vista with smaller plantings and the strategic location of maintenance track. Damper part of property near the creek could be set aside for Harakeke harvesting area.

#### **4 Old Coach Road Site**

Develop walking tracks accessible from Akaroa, linking with Old French Road and beyond.

Create a community garden and orchard for the Akaroa community, connecting to the purple pipe network.

It is proposed that this area becomes a wetland reserve and acts as both a place of education and amenity for the local community and visitors. It is intended that a small carpark and bus pull in area be included to accommodate school groups. This area would showcase Māori values associated with water and the how the Akaroa Wastewater scheme is protecting and enhancing those values. This area will include walkways, boardwalks, extensive native revegetation planting, shelter structure and interpretation panels. The design will be developed by Onuku Rūnanga to reflect te ao Māori.

#### **5 Akaroa Boat Park**

Provide a boat wash/car wash connecting to the purple pipe network, with provision made to re-capture the water to be returned to the treatment plant.