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

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027 4452546 – Secretary, Sue Church

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.

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.

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.

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.