Attachment A
Mercury Bay Community Board
6 September 2023

Comprehensive Report: Cooks Beach Lakes

1 Background

At the Mercury Bay Community Board Meeting on 13th July 2022 Mr Steve Lloyd (Cooks Beach resident), tabled a submission in relation to weed control and management of stormwater lakes at Cook Beach.

Mr Lloyd proposed Council consider the introduction of silver carp (also known as grass carp) into the lakes. Mr Lloyd highlighted the silver carp only eat weeds and algae, cannot breed in NZ waters and do not survive in saltwater. Mr Lloyd asked the Mercury Bay Community Board to support this initiative.

An action item was originated by the Mercury Bay Community Board requesting the Water Services Team to investigate the use of Silver Carp (Grass Carp) in weed control for ponds/lakes district wide.

It should also be noted that Waikato Regional Council, as per their Site Compliance Report received May 2022, issued a request for the review of the planting around Cooks Beach Lakes compared to the original planting plan submitted with the Resource Consent and any subsequent planting to meet this plan. This review has been incorporated into this project.

The purpose of this report is to update the Mercury Bay Community Board on the progress on Cooks Beach Lakes management to date and to seek their support to progress the next steps of the Lakes Management project.

2 Discussion

Water Services Staff commissioned The Cooks Beach Lakes Management Options Assessment report prepared by Ebi Hussian (BSc - Environmental Science & MSc - Aquatic Ecotoxicology) of Submerged Environmental & Scientific Dive Services Ltd in November 2022. The report presented a series of recommendations focused on managing the Cooks Beach Lakes in accordance with specific values/objectives raised by the Thames-Coromandel District Council and, the resident lake-side community.

Mitigating the riparian impacts identified in the report was subsequently prioritised by the Water Services Team and Staff commissioned Submerged Environmental & Scientific Dive Services to develop a Cooks Beach Lakes Riparian Restoration Plan in May 2023.

<u>Cooks Beach Lakes Management Options Assessment (Attachment B)</u>

The Options Assessment report discussed the catchment, riparian and in-lake impacts as well as possible mitigation/management strategies that could be used to achieve short-, medium- and long-term aspirations for the area. The key areas assessed were:

- Recreational and Visual Amenity
- Stormwater Treatment and Conveyance
- Ecological and Biodiversity Value

Against each of these areas staff assessed the catchment impacts, riparian impacts and in-lake impacts and what actions could be undertaken to mitigate these impacts. A Management Prioritisation Matrix was then formulated to act as a guide in developing a long-term management strategy.

Finally, a list of recommendations was prepared which included:

1. Educational campaign to support community/stakeholder engagement
2. Prioritising short-, medium- and long-term goals
3. Create catchment, riparian and in-lake management plans
4. Create monitoring and reporting plans
5. Draft an overall management plan

Cooks Beach Aquatic Plants Fact Sheet (Attachment C)

Water Services Staff commissioned a separate technical review of the "weed" in the Lakes undertaken by Submerged Environmental & Scientific Dive Services and this determined that in fact the "weed" is submerged macrophyte plants which aid in improving the water quality. The historical spraying and die-off of the macrophyte plants has resulted in increased nutrient load in the pond and a potential lowering of the water quality.

As a result, the suggested introduction of "Grass Carp" to remove the "weed" material (submerged macrophyte plants) has not been pursed further. The advice from Submerged Environmental & Scientific Dive Services was that the removal of the macrophyte plants would be detrimental to the health of the Lakes.

As the first step to implementing the recommendations of the Cooks Beach Lakes Management Options Assessment report, Water Services Staff commissioned Submerged Environmental & Scientific Dive Services to develop a Riparian Restoration Plan as this is a key area that can add benefit to the health and quality of the Lakes.

Cooks Beach Lakes Riparian Restoration Plan (Attachment D)

A riparian restoration plan has now been developed focusing on restoring riparian ecosystem functions around the Cooks Beach Lakes while still providing for some recreational usage and visual amenity.

- A site investigation was done that involved surveying the entire riparian margin along both lakes and the stream that flows into Lake B (Small Lake).
- The riparian zones identified during the site assessment were grouped together into functional planting areas. A plant species list was drafted for each planting zone based on the functional needs of that zone, the environmental preferences of the plant species and the ecosystem services they provide.

Restoration Goals & Objectives

Thames-Coromandel District Council has focussed on restoration goals based on priority values previously identified in the Cooks Beach Lakes Management Options Assessment report: water quality, biodiversity, recreational use, and visual amenity. The objectives of the specific planting zones were aligned with the priority values for that planting zone.

- Water Quality
    - Water quality in the Cooks Beach Lakes is primarily affected by external catchment contaminants and in-lake processes. Riparian filtration and contaminant attenuation can be used to mitigate the impacts of incoming contaminant loads.

    - The planting zones are designed to work together to achieve resilient water quality outcomes. The multi zone filtration system will provide in-lake water quality outcomes as well as enhanced ecosystem functions across the riparian yard.
    - Note: sampling of water indicates that:
        - Lake A would only allow limited recreational activities such as model boating and support in-lake recreational activities.
        - Lake B would not support any recreational activities.
- Biodiversity
    - The proposed planting plans focus on increasing continuous plated habitat, boosting species diversity, and adding enrichment species that will provide a food source for native fauna.
- Limited Recreational Use Lake A
    - Limited recreational use is a key priority for the Lake A (Big Lake).
    - Lake A (Big Lake) had more recreational areas and is often used for a variety of shore-based activities. Areas around benches, picnic tables and jetties were kept clear of dense vegetation to allow free use of the areas. To maintain recreational values certain areas will be deliberately kept clear and access to the water was prioritised.
    - As there is no recreational use in the riparian margin around Lake B (Small Lake) the proposed planting is continuous around the lake.
- Visual Amenity
    - Visual amenity and maintenance of view shafts across the lake is a key value for the lake side residents. The planting zones are strategically placed so that clear view shafts are maintained across the lake from all sides.
    - A wide variety of plant species have been selected to create a visually appealing planted environment with various colours, heights, and growth forms. Enrichment species will draw in native birds, lizards and insects that will add to the visual aesthetic and create a natural backdrop full of life.

<u>Cooks Beach Lakes Draft Planting Plan (Attachment E)</u>

Parks and Open Spaces Team has developed a plan that will manage the planting and maintenance around the Cooks Beach Lakes Recreation Reserve and terrestrial portions of the Local Purpose (Utility-Drainage) Reserve as recommended in the report from Cooks Beach Lakes Riparian Restoration Plan (May 2023) developed by Submerged Environmental & Scientific Dive Services. The only area to finalise in the plan is the selection of plant species and the area that they will cover.

Staff now seek Community Board approval to conduct stakeholder engagement, the outcome of which will be reported back to a future Community Board meeting.

The stakeholder engagement will encompass the riparian restoration plan and Parks & Open Spaces planting plan and will include both the lake-side community as well as recreational users of the lakes.

3 Significance and engagement

As per the TCDC's Significance and Engagement Policy the matters to be assessed include:

- Affect a large portion of the community
- Likely impact on present and future interests of the community,
- Community interest is high

The significance of this will be addressed by engaging with the Community by presenting and consulting the outcomes of the investigation as follows:

- The riparian restoration plan
- Parks & Open Spaces planting plan