I hereby give notice that an ordinary meeting of the Ōrākei Local Board will be held on:

**Date:** Thursday, 19 September 2019  
**Time:** 3.00pm  
**Meeting Room:** St Chads Church and Community Centre  
**Venue:** 38 St Johns Road  
**Meadowbank**

---

**Ōrākei Local Board**

**OPEN ADDENDUM AGENDA**

---

**MEMBERSHIP**

**Chairperson**
Kit Parkinson

**Deputy Chairperson**
Carmel Claridge

**Members**
Troy Churton  
Colin Davis, JP  
Toni Millar, QSM, JP  
Ros Rundle  
David Wong, JP

(Quorum 4 members)

Kim Lawgun  
**Democracy Advisor**

13 September 2019

Contact Telephone: 021 302 163  
Email Kim.lawgun@aucklandcouncil.govt.nz  
Website: www.aucklandcouncil.govt.nz

---

**Note:** The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted. Should Members require further information relating to any reports, please contact the relevant manager, Chairperson or Deputy Chairperson.
<table>
<thead>
<tr>
<th>ITEM</th>
<th>TABLE OF CONTENTS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Tāhuna Tōrea Fish Dams protection project</td>
<td>5</td>
</tr>
</tbody>
</table>
Te take mō te pūrongo
Purpose of the report
1. To seek approval to cancel the Tāhuna Tōrea mangrove removal project (Sharepoint ID 2308 in the Community Facilities 2018/2019 work programme), in light of evidence that the activity together with increasing coastal inundation and erosion along the western sandspit is likely to lead to damage of the fish dams.

Whakarāpopototanga matua
Executive summary
2. The Ōrākei Local Board approved the Tāhuna Tōrea mangrove removal project as part of the 2015/2016 Local and Sports Parks Annual Work Programme.
3. The objective of the mangrove removal project is to preserve the Tāhuna Tōrea Fish Dams at Tāhuna Tōrea Nature Reserve. Continued mangrove colonisation at increasing densities within the embankments was viewed as damaging to the integrity of the fish dams.
4. Resource consent conditions were determined in consultation with Ngāi Tai ki Tāmaki, and included the requirement for a test area (Stage 1) to be established for partial mangrove removal to be undertaken with monitoring over 12 months. As mangroves were removed, any effects on the fish dams, particularly on the edges of the fish dam embankments, were assessed.
5. Monitoring of the test area suggests that due to natural coastal erosion processes and storm events, there is a risk to the fish dams of accelerated erosion and damage should mangrove removal continue. As the fish dams are a significant feature of the reserve, the local board agreed that mangrove removal was detrimental to the integrity of the fish dams.
6. Staff recommend that the mangrove removal at Tāhuna Tōrea be cancelled.

Ngā tūtohunga
Recommendation/s
That the Ōrākei Local Board:

a) approve the cancellation of the Tāhuna Tōrea mangrove removal project (Sharepoint ID 2308 in the Community Facilities 2018/2019 work programme), noting that this activity and increased coastal inundation and erosion along the western sandspit is likely to lead to irreparable damage to the fish dams.

Horopaki
Context
7. The fish dams in the northern lagoon of Tāhuna Tōrea Nature Reserve are a significant cultural heritage feature of the reserve, and are afforded protection by the Auckland Unitary Plan. Over the years mangroves have established and spread around the embankments of the dams and there was concern that they were degrading the integrity of the dams by facilitating the accumulation of sediment and inhibiting the growth of native reeds and rushes.
8. Ecologists believed that removal of the mangroves would encourage the spread of rushes across the exposed area of the fish dam and this would be a way of keeping the integrity of
The project to remove mangroves from around the fish dams in the northern part of Tāhuna Tōrea Nature Reserve was initiated in 2016 and the local board allocated $65,000 from their LDI opex budget. An additional $62,000 of LDI opex was approved in 2018/2019 with the primary objective of protecting the Tāhuna Tōrea Fish Dams.

The Council applied for resource consent to undertake mangrove management in three stages and consent was granted in February 2017.

Conditions on the consent were determined in consultation with Ngāi Tai ki Tāmaki, and included the requirement of a test area (Stage 1) to be set up where mangroves could be removed and the area monitored for 12 months. As mangroves were removed, any effects on the fish dams, particularly on the edges of the fish dam embankments, were assessed.

The local board was then advised that the results of the monitoring suggested that due to natural coastal erosion processes and storm events, there was a risk to the fish dams that they would be more quickly eroded and damaged if further mangroves were removed. As the fish dams are a significant feature of the reserve, the local board agreed that mangrove removal was detrimental to the integrity of the fish dams.

There has been no further mangrove removal and on 20 June 2019 the local board resolved to reallocate the remaining balance of $119,000 of LDI opex from the Tāhuna Tōrea mangrove removal project to other projects.

**Tātaritanga me ngā tohutohu**

**Analysis and advice**

14. The purpose of the monitoring of Stage 1 was to measure and evaluate whether there were any detrimental impacts on the fish dam caused by the removal and pruning of the mangroves.

15. The fish dam lagoon is subject to variable tidal inputs and has recently been exposed to greater coastal process energies, particularly when high tides coincide with storm events. The site is also subject to increasing variability in sediment inputs, salinity, and wetting and drying periods. In the medium to long term, further coastal erosion and projected sea level rise will increase the frequency of the spit being breached and subsequent inundation of the site. With exposure to higher coastal process energies, embankments are subject to increased risk of erosion and or sediment accumulation infilling the area.

16. Mangrove removal anticipated by the Stage 2 of the project would further increase the erosion risk to the fish dam embankments, particularly where surface sediments are exposed.

17. There is no evidence to support the earlier hypothesis that light limitation due to mangrove growth was the primary cause of rush decline over the site. In addition, no expansion or decline of the existing footprint of rushes was observed. There also appears to be no germination of new plants beyond the existing rush cover along the pruned area of embankment 3 or elsewhere on site. There are outstanding issues surrounding tidal influx and elevation of the remaining embankments relative to the open mudflat that are likely impacting the distribution of the rushes along the remnants of the embankments in addition to competitive exclusion impacts from the mangroves.

18. Monitoring on a quarterly basis has identified that the on-going impacts of coastal inundation and storm surge at the site are likely to present a greater risk to the survival of the fish dam structures.

19. The project’s main objective was to protect the Tāhuna Tōrea Fish Dams and initial analysis concluded that mangroves are the primary and sole driver degrading the fish dams.

20. However, observation of coastal processes during the monitoring period has made it clear that tidal inundation and encumbent changes in silt and salinity levels, combined with...
insufficient erosion protection of the western sandspit will play a significant role in changing the integrity of the fish dams and the surrounding environment.

21. Further, experts concluded during the monitoring of Stage 1 that the additional factor of mangrove removal will contribute to exacerbating these effects by enabling increased exposure to coastal processes.

22. No recommendations regarding reinforcement of the western sandspit have been made to mitigate the increasing breaching and erosion that is occurring as hard engineering solutions are not considered to be appropriate for this site.

23. At a workshop on 7 February 2019 the preliminary findings of the draft monitoring report were discussed with further information required in relation to the coastal processes and iwi consultation. On review in April 2019 options to consider planting or hard options to protect the western sandspit from increased breaching and erosion were not recommended by Coastal and Geotechnical Services staff.

24. Ngāi Tai ki Tāmaki have been informed of the recommendations, and Community Facilities staff await their response as to whether they support the recommendations of the monitoring report highlighting the predominant risk to the fish dams of increased tidal inundation and erosion, and whether they wish to arrange a hui to further explore options to protect the fish dams.

25. Findings of the monitoring report and coastal assessment have been discussed with the Tāhuna Tōrea Rangers on 14 May 2019. At its 15 May committee meeting, the Tāhuna Tōrea Rangers pass that “The preservation of the existing Maori fish dams is to be given the highest priority and the Orakei Local Board is to be asked to pursue the removal of mangroves and to take other necessary measures to ensure this preservation”. The Rangers assert that effects are limited to only “inland mangroves located where stiller water sometimes laps”.

26. The reallocation of the 2018/2019 LDI opex budget of $62,000 for the Tāhuna Tōrea mangrove removal project and the reallocation of the LDI opex carry forward budget of $57,000 for the Tāhuna Tōrea mangrove removal project was approved on 20 June 2019.

27. On the basis of the findings from the monitoring period and current coastal processes, it is recommended that no further mangrove removal is undertaken and that the project be removed from the local board’s work programme.

Ngā whakaaweawe me ngā tirohanga a te rōpū Kaunihera
Council group impacts and views

28. This report has been prepared as a collaborative effort by staff from Community Facilities, Engineering and Technical Services and consultants from Morphum Environmental and Kokea.

Ngā whakaaweawe ā-rohe me ngā tirohanga a te poari ā-rohe
Local impacts and local board views

29. The proposal has been considered by the local board in a series of workshops from 5 October 2017 to 7 February 2019.

30. Staff have explained the findings of the Stage 1 monitoring to the reserve’s local care group, the Tāhuna Tōrea Rangers, but they do not support the direction recommended on ceasing mangrove removal from around the fish dams.

Tauākī whakaaweawe Māori
Māori impact statement

31. Ngāi Tai ki Tāmaki were consulted from the inception of the project in 2015 and provided direct input into the preservation of the taonga, the Tāhuna Tōrea dish dams. This has been
through providing direct input into the resource consent conditions and subsequent approval of the mangrove removal management plan.

32. Ngāi Tai ki Tāmaki also provided cultural monitoring of the physical works, and are currently reviewing the draft Tāhuna Tōrea Stage 1 Monitoring Report recommendations.

Ngā ritenga ā-pūtea
Financial implications

33. The budget for the mangrove removal project has been reallocated, but further funding could be allocated by the local board in discussions for the 2020/2021 work programme to ensure the fish dams are protected as much as possible.

Ngā raru tūpono me ngā whakamaurutanga
Risks and mitigations

34. The resource consent is active for up to 10 years on the condition that the first stage monitoring has been completed. It does not negate consideration for future strategies to protect the Tāhuna Tōrea Fish Dams, however the resource consent does not consider the coastal processes that have been identified as the key risk to the fish dam environment.

Ngā koringa ā-muri
Next steps

35. Complete resource consent conditions which include the mangrove removal Stage 1 monitoring report and Ngāi Tai ki Tāmaki hui minutes and direction.

Ngā tāpirihanga
Attachments

There are no attachments for this report.

Ngā kaihaina
Signatories

<table>
<thead>
<tr>
<th>Author</th>
<th>Johan Ferreira, Manager Project Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorisers</td>
<td>Rod Sheridan - General Manager Community Facilities</td>
</tr>
<tr>
<td></td>
<td>Adam Milina - Relationship Manager - Albert-Eden &amp; Ōrākei Local Boards</td>
</tr>
</tbody>
</table>