Ōrewa Recreation Reserve Future Management

File No.: CP2024/02201

Te take mō te pūrongo
Purpose of the report

1. To provide background to the coastal management challenges at Ōrewa Recreation Reserve.
2. To outline the technical work to date in developing a future management direction for Ōrewa Recreation Reserve, including:
    - the Ōrewa Reserve Service Assessment (2020-2021)
    - the Ōrewa Reserve Coastal Hazard Susceptibility Assessment (2020)
    - the Ōrewa Reserve Landscape Concept Report (2021-2022).
3. To update on recent engagement with mana whenua (2023).
4. To seek endorsement of naturalisation as an adaptive future management strategy for Ōrewa Reserve.
5. To seek endorsement of four high-level design concepts, which have been developed with a focus on naturalisation, to manage Ōrewa Recreation Reserve in future.
6. To seek endorsement to further investigate the design concepts, including costing analysis and consultation with key stakeholders and the community.

Whakarāpopototanga matua
Executive summary

7. There are current and historical coastal management challenges along the entire length of Ōrewa Beach. Some of these management challenges have been exacerbated by recent storm events, resulting in accelerated erosion directly impacting several sections of Ōrewa Beach.
8. This report focusses on Ōrewa Recreation Reserve (Ōrewa Reserve) which is the area of land situated north of the Ōrewa Beach Holiday Park and south of Riverside Road.
9. The Ōrewa Beach Esplanade Enhancement Plan directs that a range of coastal management options should be implemented along the length of Ōrewa Beach. Management options promoted include a mix of hard defences (seawalls) through to naturalisation and dune enhancement where at all possible.
10. This approach to coastal management for Ōrewa Beach is supported via the key directives of the New Zealand Coastal Policy Statement (2010) and was further set out in staff evidence submitted to the Environment Court (2020), supporting Auckland Council's application for a seawall to be constructed between Marine Parade and Kohu Street.
11. The Environment Court granted approval for the seawall project in 2020 with reference to supporting evidence that confirmed Auckland Council would consider a balance of other management techniques (including naturalisation) along Ōrewa Beach, where the width of remaining esplanade reserve made this a viable option.
12. Naturalisation is a coastal adaptive strategy which involves the managed realignment of the coastal edge and restoration of the dune landscape and its ecosystems to build natural resilience to coastal processes and storm events.
13. On developed reserves, such as Ōrewa Reserve, it is necessary to relocate key park assets, setting them back from the predicted coastal hazard area. This can be phased in with the established asset renewal programme.

14. In 2020 a programme of visitor research was carried out at Ōrewa Reserve, to understand the range of experiences the reserve provided, and the value placed on these experiences by the community. A summary of key findings is included in the 'context' section of this report.

15. This research was documented in the Ōrewa Reserve Service Assessment and was adopted by the Hibiscus and Bays Local Board in 2021. It provided four service outcomes which would guide the development of a feasible and cost-effective management approach for Ōrewa Reserve.

16. In 2020 Tonkin and Taylor produced the Ōrewa Reserve Coastal Hazard Susceptibility Assessment which mapped areas of the reserve which will be susceptible to coastal erosion in future years. This work was primarily intended to assist with planning the surf club relocation but also served to outline the broader coastal process and natural hazard considerations for Ōrewa Reserve.

17. In 2021 Bespoke Landscape Architects were engaged to analyse the information available and come up with a management approach for Ōrewa Reserve. One requirement was that the four service outcomes adopted by the local board were incorporated, and another was that the management direction should be achievable cost effectively.

18. In 2022 Bespoke Landscape Architects produced four high-level concept options which configured the park assets in different ways. All the concepts were aligned with a naturalisation strategy as this was found to be the most cost-effective approach in this location. The concept designs provided different weightings to various activities within the reserve. For example, some allowed for more formalised parking, and others prioritised open space and play outcomes.

19. A mana whenua consultation process was carried out with Ngāti Manuhiri in 2023. Feedback received confirmed their preference for management of Ōrewa Reserve within a naturalisation context. They communicated the need for sound environmental stewardship and environmental restoration where possible. Other considerations included the use of native planting, protection of wai (water), protection of wāhi tapu (sacred space), enhancing the natural environment, having the opportunity to input into future play environments for tamariki (children) and the inclusion of cultural safety induction for contractors. Mana whenua feedback did not rule out any of the four concept options.

Ngā tūtohunga
Recommendation/s

That the Hibiscus and Bays Local Board:

a) ohia / endorse naturalisation as an adaptive strategy for Ōrewa Reserve

b) ohia / endorse four candidate high-level design concepts, from the Bespoke Landscape Architects report, as future management options at Ōrewa Recreation Reserve (Attachment C to the agenda report)

c) ohia / endorse further investigation of these design options, including the development of high-level costings and public consultation.

Horopaki
Context

Ōrewa Beach coastal management context

20. Ōrewa Beach is one of the most popular beachside destinations in the Hibiscus and Bays Local Board area. It is valued by locals and visitors from across the Auckland region. It is a place of natural beauty and highly valued as a recreational resource.

21. The coastal edge of Ōrewa Beach is exposed to the ongoing processes of tide, wind, and wave energy. More recently climate change impacts such as sea level rise and extreme weather events have led to greater impacts on the coastal environment.

Coastal policy

22. At times these impacts have created hazards on the reserve. Cyclone Gabrielle (Feb 2023) was one example. The New Zealand Coastal Policy Statement 2010 (NZCPS) and the Auckland Region Coastal Management Framework (2017) require that hazards in developed areas of the coastal environment be adequately managed.

23. The NZCPS gives direction on coastal management. It recommends the application of a range of coastal management techniques, depending on localised factors. Some situations will require the construction of coastal defence structures such as sea walls. Other situations will be more suited to the restoration of natural coastal buffers such as dunes, wetlands and mangroves as natural defences against erosion and storm impacts.

24. Auckland Council has developed a range of approaches for managing land within its control along the length of Ōrewa Beach. The Ōrewa Beach Esplanade Enhancement Plan 2014 (OBEEP) directs that a range of coastal management options should be implemented along the length of Ōrewa Beach. Management options include a mix of hard defences (seawalls) and naturalisation with dune enhancement where possible.

Northern seawall

25. Planning, design, and consenting has recently been carried out on the northern seawall project, located between Marine Parade and Kohu Street in Ōrewa. Due to the narrow and vulnerable section of coastal reserve in this location, an engineered sea-wall structure was determined to be the most appropriate management option. The Environment Court granted approval for this project in 2020 with reference to supporting evidence that confirmed Auckland Council would consider other management techniques (including naturalisation) along Ōrewa Beach, where the width of remaining esplanade reserve made this a viable option.

Ōrewa Recreation Reserve

26. This report focuses on Ōrewa Recreation Reserve (Ōrewa Reserve), which is the area of land situated north of the Ōrewa Beach Holiday Park and south of Riverside Road.

Fig 1: Location map of Ōrewa Reserve

Coastal processes and management issues at Ōrewa Reserve

27. The scouring of the reserve frontage during king tides and storm events results in a hazardous change in levels between the reserve and the beach below. This is especially evident in the area adjacent to the Norfolk Island pine trees at the northern end of the reserve where the tree roots are exposed due to additional turbulence and scour. The prominent seaward location of the rock revetment (retaining structure) located in front of the property immediately to the north of the reserve further exacerbates these processes with 'end effects' at the transition between the structure and reserve edge.

28. With ongoing storm events and sea-level rise, the natural beach response is to 'roll-back' (find a high tide equilibrium further inland) to maintain a wide buffer of dry high tide beach. However, at this location the trees are effectively 'holding the line' of the reserve at a seaward position. Management of the subsequent tree root exposure and the cliffing of the reserve edge has prompted a requirement of ongoing active management by mechanical sand transfer work, to manage the transition from the reserve down to beach level.

29. Further commentary on the beachfront trees is included below in the 'Analysis and Advice' section.

Fig 2: Storm damage at the northern end of the reserve following Cyclone Gabrielle, Feb 2023

Fig 3: The northern end of the reserve after sand transfer work

30. The current management practice of sand transfer restores the dry high tide beach gradient and usability of the beach-reserve interface. Its success is temporary and limited because of the ongoing coastal management pressures described above, with future significant high tide and storm events having the potential to remove sand offshore again.

31. Windblown sand is a common issue during strong east and north-easterly winds resulting in further management challenges within the reserve and to residential properties along the Hibiscus Coast Highway. The current location of the reserve edge does not have sufficient width from the mean high-water mark to enable dune planting and stabilisation of the windblown sand.

32. Another driver for a defined future management direction is that reserve assets are ageing and require renewal. An example is the basketball court which is located close to the coastal edge and is increasingly vulnerable to erosion and undercutting. Its current location is not sustainable in the long term, and it needs to be relocated away from the coastal edge, as part of holistic planning for the reserve.

Fig 4: The basketball court located near the coastal edge

Fig 5: Picnic table located near the coastal edge

Service assessment and parks service outcomes for Ōrewa Reserve

33. In 2020 a programme of visitor research and data collection was undertaken at Ōrewa Reserve to understand the range of experiences the reserve provided, and the value placed on these experiences by the community. This work was important to ensure that the experiences valued by the community are retained and protected with any future management approach.

34. Key insights on the use of Ōrewa Reserve were:

- there is a greater number of visitors to Ōrewa Reserve and beach than was anticipated
- the experiences provided by the interface between Ōrewa Beach and reserve are key to the community choosing to recreate at this location
- the predominant activity undertaken by visitors is active recreation (walking), with comparable numbers undertaking secondary activities of passive recreation (sitting/relaxing) and play on Ōrewa Reserve
- Ōrewa Beach is favoured by visitors undertaking the primary activity of active recreation
- Ōrewa Beach is more popular than the grassed areas with visitors undertaking passive recreation
- most visitors undertaking active recreation on Ōrewa Reserve used the paths
- the playgrounds were the most used assets on Ōrewa Reserve followed by the basketball court.

35. Conclusions drawn from the visitor analytics work were used to identify four service outcomes for Ōrewa Reserve through the development of an adaptive, cost effective and sustainable management approach. These service outcomes are:

- enhance opportunities for beach-related recreational experiences on an extended dry Ōrewa Beach
- improve access to Ōrewa Beach along the length of the Ōrewa Reserve, to help facilitate beach-related recreational activities, including walking along the beach
- retain current play value within the wider Ōrewa Beach setting, with a particular focus on providing pockets of play experiences for young children on Ōrewa Reserve and basketball/beach volleyball experiences within the wider reserve
- enhance opportunities for north-south pedestrian and cycling movements along the reserve, which are integrated with the existing coastal walking/cycling experience throughout the Ōrewa Beach setting.

36. These outcomes were endorsed by the Hibiscus and Bays Local Board at their July 2021 meeting (Attachment A to the agenda report) and informed the brief for the Ōrewa Reserve Landscape Concept Report undertaken by Bespoke Landscape Architects 2021-2022 (refer below).

Hazard Susceptibility Assessment for Ōrewa Reserve

37. In 2012, Tonkin and Taylor undertook a high-level erosion and inundation susceptibility study for the Ōrewa Surf Club. Recognising the passage of time, and updated climate change science available, Auckland Council commissioned Tonkin and Taylor, in 2020, to update the Ōrewa Reserve Coastal Hazard Susceptibility Assessment. The assessment focussed on calculating the ‘Areas Susceptible to Coastal Erosion’ (ASCE) within the reserve. It mapped the present-day context and provided estimations for 2080 and 2130 impacts (including climate change impacts) to provide a scientific basis for land management decisions, including further determining the future location for the Ōrewa Surf Club.

38. The results of the Tonkin and Taylor work have been mapped below, with the length of the reserve broken down into three main coastal cells considering the factors influencing coastal change along the frontage. For example, the role of the rock revetment in front of the surf club in interrupting the coast between cell ‘A’ and ‘C’.

39. The full Ōrewa Reserve Coastal Hazard Susceptibility Assessment has been included as Attachment B to the agenda report.

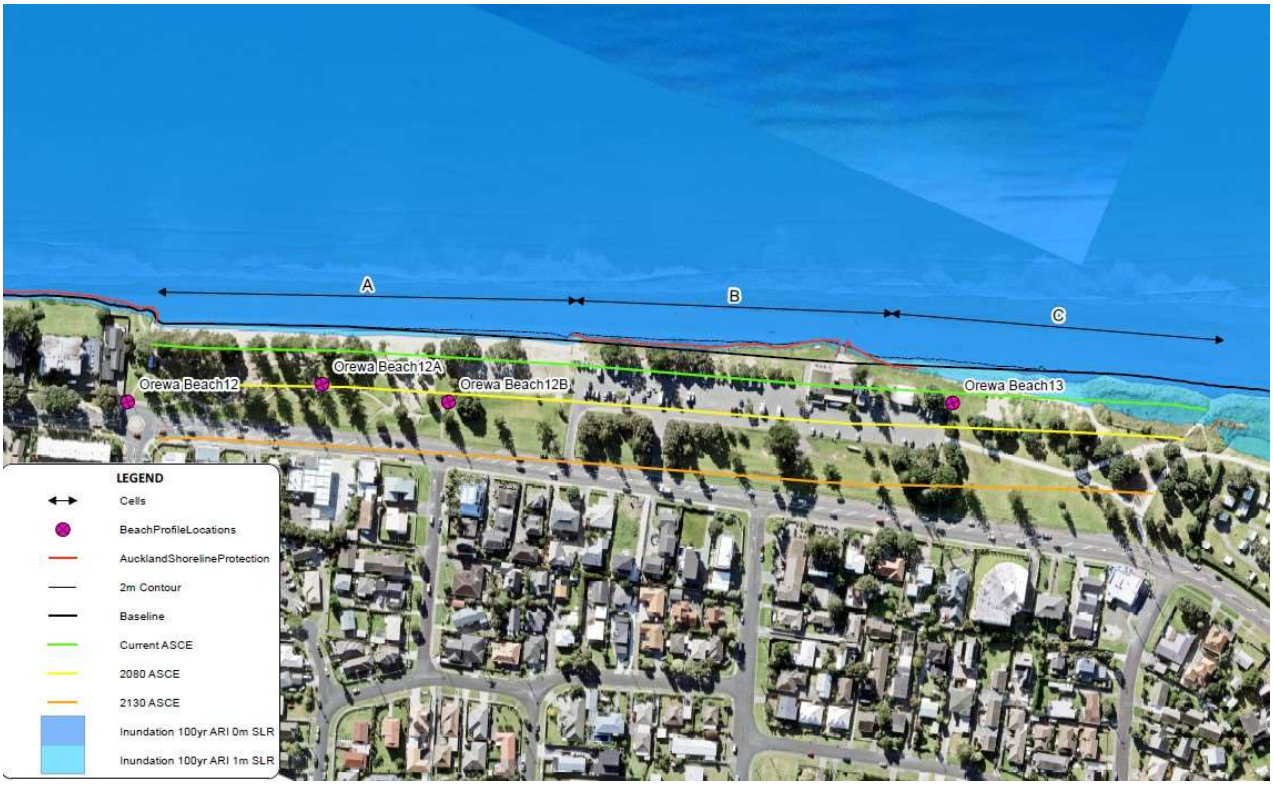

Fig 6: Tonkin and Taylor future ‘Areas Susceptible to Coastal Erosion’ (ASCE) calculations, 2020

Tātaritanga me ngā tohutohu
Analysis and advice

Future management options for Ōrewa Reserve

40. Figure 6 shows that by 2080 coastal erosion will impact between one third and half of the reserve (yellow line), depending on the location along the length of the reserve.

41. To support long-term, sustainable coastal management, there is a need to consider how Ōrewa Reserve will look and be managed in the future, while ensuring that the key recreational experiences can be retained. In achieving this, it is important to demonstrate how the results of the coastal hazard assessment are given effect to, as required by the NZCPS.

Naturalisation

42. Naturalisation is a coastal adaptive strategy which involves the strategic and managed realignment of the coastal edge, relocating assets outside of the coastal hazard area and working with the natural coastal environment to create a more resilient coastal edge. At Ōrewa Beach, opportunities include enhancing the width of dry high tide beach and restoration of the dune landscape and its ecosystems to provide a natural buffer to coastal processes and storm events.

43. Benefits of naturalisation include:

- working with natural coastal processes and beach functioning

- low visual impact and maintaining the natural character of the coast
- allows for beach-related recreational experiences on a restored and extended dry high tide beach and back dune, through the full range of the tides
- offers a graduated experience and improved access from the reserve to the beach via defined footpaths within the dune landscape
- lower enduring capital and operational maintenance costs related to dune and plant maintenance versus coastal structure maintenance, repairs and renewals
- restores the dune landscape and its ecosystems to build natural resilience to coastal processes.

44. Where assets are located too close to the coastal edge and subject to ongoing management and maintenance pressure, sustainable future management practices prompt the need to relocate assets landward from the defined coastal hazard area. At Ōrewa Reserve, this can be achieved within the established asset renewal programme and can be informed by the maps within the Tonkin and Taylor Coastal Hazard Susceptibility Assessment.

45. This adaptive strategy can only be implemented where there is sufficient reserve land to allow for the managed retreat of park assets. This was tested by Bespoke Landscape Architects during their landscape concept work which will be set out in the following section of this report. High-level planning indicates that Ōrewa Reserve is of suitable length and width for naturalisation to be implemented and function successfully.

46. Staff are recommending that Ōrewa Reserve is a suitable site for a naturalisation strategy to manage the reserve in future.

Naturalisation precedents

47. Auckland Council has implemented similar naturalisation strategies across the region in the past.

48. In 2009, significant erosion at the south of Muriwai Beach on Auckland's west coast triggered the realignment of the southern car park approximately 40m landward, with substantial regrading and replanting of the coastal edge. The project enabled safe access to the beach to be restored and provided a resilient dune system and dry high tide beach that offered improved amenity to the area. The works also prompted the independent relocation of the surf club from immediately behind the eroding dune face to some 300m inland, where an improved facility was rebuilt.

49. More recently, naturalisation by dune restoration was implemented successfully at the eastern end of Stanmore Bay, immediately following the January 2018 storm events. Unconsented, legacy rock armour material that was exposed during the storm was removed, and the eroded reserve edge reprofiled to a safe gradient and replanted.

50. Another successful example of dune restoration is the southern end of Ōrewa Beach, in front of the camping ground, which was established approximately 25 years ago.

Fig 7: Storm damage at the eastern end of Stanmore Bay, Jan 2018

Fig 8: Dune restoration implemented at Stanmore Bay 2018-19.

Fig 9 Beach access incorporated into dune restoration work at Stanmore Bay 2018-19.

Ōrewa Reserve landscape concept report

51. In 2021 Bespoke Landscape Architects were engaged to analyse the technical information available, and work with coastal engineers Tonkin and Taylor to help inform a management approach for Ōrewa Reserve that was sympathetic to the results of the Coastal Hazard Assessment. The brief set out that the endorsed four service outcomes should be incorporated, and that the proposed management direction should be cost effective for Auckland Council.

52. In 2022 Bespoke Landscape Architects produced four high-level concept options which configured the existing park assets and activities in different ways. All concepts were aligned with a naturalisation strategy but included provision to retain a surf club boat accessway in front of the relocated surf club building. The concept designs gave different weightings to different uses within the reserve.

53. The Bespoke Landscape Concept Report presented four concept design options for the reserve. All options share the following characteristics:

- follow a naturalisation approach to future management on the reserve
- allow for coastal retreat based on a 2080 planning horizon scenario
- provide for improved access between the beach and the reserve
- include provision for playgrounds, sporting courts, public toilets, carparking and other recreational activities
- allow for a shared path connection running north-south along the Hibiscus Coast Highway
- include space for the Ōrewa Surf Life Saving Club, in a new location, set back from its existing location
- all options envisage the eventual removal of Norfolk Island pine trees and some Pohutukawa trees from the beachfront of the reserve, noting that other trees were planted landward within in the reserve, approximately 20 years ago
- all options will reduce the requirement and associated costs for sand transfers to this location post storm events.

Tree discussion

54. The beachfront trees at the northern end of Ōrewa Reserve are scheduled as notable trees within the Auckland Unitary Plan. These are mostly Norfolk Island pine trees and include

some Pohutukawa. These trees are valued by the community for cultural and environmental reasons. Due to their size and age, they are a valuable source of carbon sequestration, pollutant adsorption, stormwater runoff interception and oxygen production.

55. The Urban Forest Specialist has communicated that these trees are in good health, are stable in their current position and will remain so in the short-medium term. Generally, Norfolk Island pine and Pohutukawa species have a long-life expectancy. However, their location and the likely impacts of coastal processes place some uncertainty on their long-term health.

56. Their location on the foredune is within the current area susceptible to coastal erosion. Their root mass is acting as a 'wall' which is preventing the beach from establishing a wide buffer of dry high tide beach landward of the trees. Consequently, their root zones become scoured during storms and king tides.

57. As coastal processes take their course, increased root zone erosion may undermine the root plate and the stability or health of the trees. It is difficult to quantify when or to what extent this may occur. Electronic monitoring devices have been fitted to the trunks of these trees, recording tree movements and rotation. Currently this information shows the trees to be stable even after a weather event where sand has subsided.

58. Another consideration is that after a weather event where sand subsides leaving a steep escarpment, health and safety risks must be managed. There is a risk of falls from height, collapse of the sand bank and potential entrapment. There will be a requirement for council to manage these risks which may result in fencing off the area within the vicinity of the root zones to isolate the hazard.

59. The current management methodology involving sand transfer offers protection to the trees and minimises health and safety issues around the roots and escarpment. It involves closing the areas of beach affected, using machinery to load sand at the southern end of the beach. Sand is transported and graded down from the reserve level to the beach level. This work is covered by a consent and has associated operational costs of $150,000 - $200,000 each time, based on a medium to large scale storm event. In 2023 there were two large scale storm events, requiring two transfers and other minor reshaping work.

60. The Resilient Land and Coasts team have advised that the requirement for sand transfers will increase in future years due to sea level rise, climate change and weather events. The local board will need to consider these costs, and whether this management practice is financially sustainable in the long term.

61. While the trees remain in situ, and while funding remains available, Parks and Community Facilities will continue to carry out sand transfer operations after storm events, to support the health of the beachfront trees and manage health and safety concerns.

62. To achieve a successful planted, naturalised dune system, with high tide beach experience through the range of the tides as described within this report, the removal of the beachfront trees will be required. A resource consent will be necessary to do this, and more project work is required to inform timeframes. This could include removal of all trees at once or a more staggered approach, retaining some trees where possible whilst allowing for naturalisation in other areas depending on desired outcomes.

63. Each of the four concept design options, outlined below, involve the eventual removal of the beachfront trees (Attachment C). The current ecosystem service value of the existing trees should be taken into account and appropriate replanting incorporated into any future design to remedy their loss.

Concept A aims to achieve existing carparking numbers with formalised parking zones placed within the reserve. A full basketball court and shelter near the proposed Auckland Transport bus stop is included. Pockets of play distributed throughout the reserve can accommodate various age groups.

Fig 10: Bespoke Concept A

Concept B aims to achieve formalised parking near the Surf Life Saving Club with an 'overflow' parking zone within the grassed open space. Two medium scale play spaces can accommodate two distinct age groups, as well as two opportunities for fitness zones - one along the promenade and one along the dune planting at the southern end.

Fig 11: Bespoke Concept B

Concept C provides a centralised hub with formalised parking near the Surf Life Saving Club with an 'overflow' parking zone within the grassed open space. The central hub provides active use with a basketball court, volleyball court, and fitness equipment. Play is divided into two zones with opportunity to target two user groups.

Fig 12: Bespoke Concept C

Concept D provides a centralised hub with formalised parking near the Surf Life Saving Club. The central hub provides active use with a basketball court, volleyball court, and fitness equipment. The removal of overflow parking allows for a large-scale 'destination' play space opportunity aiming to target multiple user groups and an all-inclusive space.

Fig 13: Bespoke Concept D

64. Staff recommend that the Hibiscus and Bays Local Board endorse concept options A-D, from the Bespoke Landscape Concept report, as an appropriate suite of options for further investigation, which would include development of high-level costings and public consultation.

Tauākī whakaaweawe āhuarangi
Climate impact statement

65. This work is directly linked to minimising climate change impacts and building resilience to coastal hazards, including sea-level rise, at Ōrewa Reserve.

66. Dune naturalisation and planting of this section of beachfront will improve the beachfront's natural resilience to king tides, coastal storms and sea level rise, while providing ecological and environmental benefits that are also key to mitigate future climate change.

67. It is anticipated that a more natural management strategy will also reduce future active operational management requirements.

68. In contrast, hard management solutions such as provision of further seawalls or rock revetments along Ōrewa Beach would require careful management to mitigate potential adverse effects and the higher carbon emissions associated with construction.

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

69. This project and the recommendations in this report are supported by key departments across the council family including Parks and Community Facilities (as the asset manager) and Resilient Land and Coasts Department (as technical specialists in coastal hazards, climate change and engineering). The Urban Tree Specialist has been involved in discussions regarding the beachfront trees.

70. This project does not impact the work of council-controlled organisations. We are not proposing any changes to the on-street parking provided by Auckland Transport, or the relocation of any public transport facilities. The shared path that runs through Ōrewa Reserve is managed and maintained by council.

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

71. This is a high priority project for the Hibiscus and Bays Local Board, and it is anticipated that there will be a high degree of local board and public interest in the information contained within this report.

Tauākī whakaaweawe Māori
Māori impact statement

History and background

72. This project was first introduced to mana whenua in 2021 at a North-West Forum hui. Ngaati Whanaunga, Ngāti Maru, Ngāti Manuhiri, Ngā Maunga Whakahii o Kaipara, Te Akitai Waiohua and Ngai Tai ki Tamaki representatives were in attendance.

73. Ōrewa Reserve coastal management challenges were presented and discussed. It was outlined that this project has similar themes to the Whangaparāoa Shoreline Adaptation Plan: i.e., accepting reversal of infrastructure to rectify hazard issues, naturalisation (letting nature take its course), protection of biodiversity and protection of heritage.

74. This meeting introduced the Ōrewa Reserve Service Assessment work and sought direction from the iwi representatives on who should be involved. Ngāti Manuhiri, Ngai Tai ki Tamaki and Ngā Maunga Whakahii o Kaipara were put forward to contribute to this work.

75. In 2023 these iwi were invited to provide input into this project. A response was received from Ngāti Manuhiri indicating that this work was a priority within their rohe and allocated a team member to work with the Parks and Places Specialist.

Ngāti Manuhiri hui and briefing

76. An initial hui was held with Ngāti Manuhiri at Ōrewa Reserve (Nov 2023) to introduce the project. A second hui was held at the Ngāti Manuhiri offices in Warkworth (Dec 2023). A subsequent site meeting was held at Stanmore Bay to observe the coastal edge naturalisation work that was completed in 2019.

77. Throughout this period relevant supporting documents were shared with Ngāti Manuhiri. These included the Whangaparāoa Shoreline Adaptation Plan, the Ōrewa Reserve Service Assessment, the Ōrewa Reserve Coastal Hazard Susceptibility Assessment, and the Landscape Concept Report. This information, in addition to the hui with council staff, enabled Ngāti Manuhiri to consider their position and management preferences for Ōrewa Reserve.

Ngāti Manuhiri position

78. Ngāti Manuhiri have indicated support for the project proposals based on demonstration of cultural sensitivity (respecting cultural values), environmental stewardship (incorporating measures to protect and enhance the natural surroundings) and the collaborative approach taken by the project team in consulting with mana whenua toward an inclusive and culturally sensitive development.

79. Ngāti Manuhiri have offered specific recommendations for further enhancement of the project. The following is an excerpt from their position statement:

    i. ***Encourage Native Planting:*** *We strongly recommend encouraging the planting of native species throughout the development area. Native vegetation not only enhances the natural beauty of the landscape but also contributes to biodiversity and ecosystem health.*
    ii. ***Protection of Wai:*** *Waterways can become severely degraded due to poor management of waste, stormwater, earthworks, and other pollutants that significantly decrease their mauri. The importance of the coastal area to Ngāti Manuhiri over many generations is reflected by ancient whakataukī and waiata, traditions associated with the ocean, the sailing and navigational skills. These cultural practices highlight the interconnectivity between humans and nature, emphasizing the need to preserve water sources for future generations. All measures and opportunities to improve, protect and enhance waterways should be taken.*
    iii. ***Protection of Wāhi Tapu:*** *Ngāti Manuhiri believes that the inherent mana of their tupuna lives on through whakapapa and their successive generations and considers*

the wāhi tapu (sacred space) and urupā (cemeteries) where their tupuna lie as places that are tapu (sacred) requiring both kaitiakitanga (protection) and utu (reverence). There are known archaeological sites, some of these culturally significant sites in the area are recorded on Auckland Council's website and there will be undiscovered sites in the area. As such any future development needs to be completed with Accidental Discovery Protocols in place.

iv. ***Opportunities to Enhance the Natural Environment:*** *Whilst we understand that some of the purpose of this project is to create recreational space and access points where people can enjoy the natural feeling and mauri (life-force) of the area, we also appreciate that efforts are made firstly to ensure the environment is restored to how it would naturally form from the elements that interface with Ōrewa. We recommend that wherever possible, all enhancements are approached with a naturalised framework, using sustainable resources.*

v. ***Play value for our Tamariki:*** *Looking into future, we understand that climate change and sea level rising will impact the current play experiences for our Tamariki. We recognise that while these features are not currently at risk that they remain in place and maintained until necessary retreat measures are required. As this space develops, we would like to be kept well informed and involved with future planning.*

vi. ***Cultural safety:*** *All contractors and sub-contractors are required to complete a cultural induction prior to works commencement.*

Ngā ritenga ā-pūtea
Financial implications

80. There are no direct financial implications to the local board endorsing the recommendations within this report. Costings of the high-level concept designs are yet to be determined, but a cost-effective solution will be sought to respond to the current management challenges at Ōrewa Reserve. High level costings for all options will be prepared, including the envisaged consequential opex requirements and brought back to the local board at a future date.

81. From Auckland Council's experience evaluating the cost of implementing a range of coastal management solutions across the region, it is anticipated that the recommended naturalisation of the coast will be of lower capital and ongoing operational cost than alternative 'hard' options.

Ngā raru tūpono me ngā whakamaurutanga
Risks and mitigations

82. The coast holds intrinsic value to iwi, the community and Aucklanders. This includes environmental, recreational and amenity, cultural, aesthetic and economic values. Some of the values attributed to Ōrewa Beach and Reserve are likely to be contradictory. Trade-offs in identifying a preferred management option will be managed through comprehensive engagement and partnership with iwi, key stakeholders and the community.

83. All concept designs are high level at this stage. There is risk that further design investigation may reveal unexpected costs or site constraints, which may require trade-offs, and flexibility in approach, to achieve one preferred management option for the reserve.

84. Stakeholder and community expectations may not align with available funding. Expectations on what is possible with the available council budget will need to be clearly communicated during the community and stakeholder engagement sessions.

Ngā koringa ā-muri
Next steps

85. Endorsed design concepts will be further investigated by staff to inform local board decision making, including:

- developing costings for all design concepts, including anticipated consequential opex requirements
- consulting with stakeholders and the wider community to get feedback on the design concepts
- reporting back to the local board on a preferred design concept for their endorsement.

Ngā tāpirihanga
Attachments

No.	Title	Page
A	Hibiscus and Bays Local Board service outcome resolution HB/2021/80 *(Under Separate Cover)*	
B	Tonkin and Taylor: Ōrewa Reserve coastal hazard susceptibility assessment *(Under Separate Cover)*	
C	Bespoke Landscape Architects: Landscape concept report *(Under Separate Cover)*	

Ngā kaihaina
Signatories

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