

# Draft Hereweka Harbour Cone Management Plan 2026

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# Introduction

## 1.1 Preamble

### Landscape Setting and Physical Context

The 328-hectare Hereweka Harbour Cone property, located at 1299 Highcliff Road, Otago Peninsula, occupies a central and elevated position on the Otago Peninsula, straddling the main ridgeline behind Broad Bay and Portobello. The property encompasses the summit of Peggys Hill—the Peninsula’s second-highest point—and Harbour Cone, one of the region’s most distinctive and recognisable volcanic landforms. From these high points, expansive views are afforded across Otago Harbour to the west and Hoopers Inlet and the Pacific Ocean to the east, reinforcing the prominence of Hereweka as both a visual landmark and a place of long-standing cultural significance.

The landscape is organised around two principal catchments: Smiths Creek draining westward toward Otago Harbour, and Stewarts Creek flowing eastward toward Hoopers Inlet. These catchments have influenced both natural processes and historic land use, shaping the location of farmsteads, tracks, quarrying activity, and areas of shelter and cultivation.

Highcliff Road forms the primary access route and public viewing corridor through the property, tracing the Peninsula ridgeline and providing panoramic vistas across the surrounding landscape. Additional access points occur where the property adjoins Camp Road, Sandymount Road, and Bacon Street. The Hereweka Harbour Cone block encircles three sides of Larnach Castle and adjoins land administered by the Otago Peninsula Trust on Sandymount Road, including the site of the historic lime kilns. This spatial relationship underscores the close historical and functional connection between Hereweka, Larnach’s estate, and surrounding rural settlements.

### Geological Foundations and Landscape Evolution

The physical character of Hereweka Harbour Cone reflects the broader geological history of the Otago Peninsula, which is dominated by volcanic formations associated with the Dunedin Volcanic Group. Peggys Hill and Harbour Cone are formed from resistant basaltic lava flows that have weathered more slowly than surrounding materials, resulting in their pronounced relief and distinctive profiles.

Much of the surrounding land is underlain by volcanic ash and rubble that readily weathers into clay-rich colluvium. This material, together with loess (wind-blown silt) mantling much of the Peninsula, has contributed to widespread slope instability in the form of slips, slumps, and earthflows. A fault scarp defining the eastern face of Peggys Hill further emphasises the dynamic geological processes at work in the area. At the southern end of the property, a narrow band of sedimentary rock, including limestone, is exposed near Stewarts Creek—an outcrop that underpinned the development of local lime quarrying and burning operations.

These geological processes have produced the steep, rugged topography that characterises Hereweka Harbour Cone. They have also shaped patterns of human occupation, influencing where buildings could be safely constructed, where roads and tracks could be formed, and where quarrying and farming were viable.

### **Mana whenua connection and hītori (history)**

Hereweka forms part of the wider cultural landscape of the Otago Peninsula (also known in recent times as Muaupoko), which has been occupied and utilised by Waitaha, Kāti Mamoe, and Kāi Tahu for centuries prior to European arrival. Permanent and seasonal settlements were concentrated around the Peninsula's bays and inlets, where kai moana and other resources were abundant. The interior ridgelines and hills, including Hereweka, were integral components of this wider network of travel, mahika kai sites and cultural association.

The name Hereweka is commonly interpreted as meaning "catch weka" or "swift weka," referencing the significance of the weka as a food source and situating the place firmly within a Māori cultural framework. Hereweka also features in Kāi Tahu oral traditions, including the Tarewai narrative, in which the landform is associated with refuge, survival, and endurance following inter-iwi conflict in the late eighteenth century.

Although no pre-European archaeological sites have been formally recorded within the Hereweka Harbour Cone property itself, this absence does not diminish its cultural significance. Māori use of the landscape did not depend solely on fixed sites; rather, the land functioned as part of an interconnected cultural system extending across the Peninsula. The potential for undiscovered archaeological material remains, and the area continues to hold cultural meaning for mana whenua as part of the wider Otago Peninsula landscape.

### **European Settlement and Agricultural Transformation**

European engagement with the Otago Peninsula intensified in the early nineteenth century following sealing and whaling activities, with the first permanent European settlement established at Weller's Rock in 1831. In 1844, the Otago Association purchased the Otago Block from Kāi Tahu, initiating systematic colonial settlement based on agricultural development and structured land tenure.

The Hereweka Harbour Cone area was surveyed for individual land titles in 1863, and by the early 1870s most of the land had been taken up. Early farms were typically small, reflecting the steep terrain and the Wakefield ideal of a closely settled, independent farming community. Clearing the dense native forest that once covered the Peninsula was one of the most demanding tasks faced by settlers, with timber from tōtara, rimu, and mataī used for buildings, fencing, and fuel.

As farming progressed, a distinctive rural landscape emerged. Small dairy units were established across the slopes, each with a modest dwelling, cow byre, barns, and ancillary structures. Dry-stone walls were constructed from stones cleared from paddocks, serving as durable boundary markers and enduring symbols of agricultural "improvement." Shelter plantings—most notably macrocarpa—were established around farmsteads and along roads to mitigate exposure to wind and weather.

### **Industry, Infrastructure, and Community Life**

Agriculture at Hereweka Harbour Cone was closely integrated with local industry and infrastructure. Dairy farming formed the economic backbone of the area, supported by cooperative enterprises such as the Harbour Cone Cheese Factory (established in 1877) and later creameries that linked Peninsula farmers to Dunedin and overseas markets.

Lime quarrying and lime-burning represented another important industry, exploiting the limestone outcrops near Stewarts Creek. The remains of lime kilns, tramways, and processing areas provide tangible evidence of this activity and its role in supplying building materials and agricultural lime to the wider region.

The construction of Highcliff Road in the late 1860s was pivotal in connecting the Harbour Cone farms to Portobello, Broad Bay, and Dunedin. Historic farm tracks, bridle paths, and internal roads remain legible across the property, illustrating how people and goods moved through what was once a densely settled rural community.

Prominent individuals, including William Larnach and Walter Riddell, exerted a strong influence on the area's development. Larnach's Camp Estate dominated landholding patterns and employment opportunities, while Riddell played a key role in the establishment of Peninsula dairy processing and associated infrastructure. Their farmsteads and associated features remain important reference points within the historic landscape.

### **Ecological Change and Contemporary Landscape Character**

Historically, Hereweka Harbour Cone would have supported extensive native forest cover, much of which was progressively cleared during the nineteenth century to make way for farming. Today, only a few remnants of original forest remain, alongside areas of largely regenerating vegetation, interspersed with pasture and exotic plantings. Several significant native bush remnants persist and have been identified as Areas of Significant Biodiversity Value under the Dunedin City District Plan (2GP).

Grazed pasture remains the dominant land cover, reflecting a transition from early dairy farming to predominantly sheep farming. While exotic scrub occurs in places, the property has generally been well managed and remains relatively free of major pest plant infestations such as gorse and broom. The evolving ecological restoration programme sits alongside the historic farming landscape, adding another layer to the site's complexity and value.

### **Heritage Significance and Public Experience**

One of the most notable aspects of Hereweka Harbour Cone is the strength and clarity of its historic cultural landscape. Derelict dwellings, dry-stone walls, farm tracks, paddock boundaries, and shelter plantings are widespread and, collectively, remarkably intact. The Archaeological Assessment Scoping Report describes the area as "a pristine archaeological landscape of historic occupation," offering rare insight into nineteenth- and early-twentieth-century settlement patterns on the Otago Peninsula. The property has been identified as a place of national significance as a relict landscape<sup>1</sup>, reflecting the survival of historic landscape patterns and features.

The public is drawn to Hereweka Harbour Cone because it provides an unusual opportunity to explore the interior of the Peninsula in a setting where public access is actively supported and encouraged. Visitors can experience dramatic volcanic landforms, evolving ecological restoration, and a dense concentration of historic features within a working rural landscape.

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<sup>1</sup> Middleton, A. (2012)

A network of tracks support walking, cycling, and other low-impact recreation. The property's proximity to urban Dunedin enhances accessibility, and for residents of Broad Bay and Portobello it sits directly on their doorstep as a valued community asset and an iconic part of the local landscape.

Together, these elements make Hereweka Harbour Cone a place of learning, reflection, and recreation—where natural processes, cultural memory, and historic land use remain visibly and meaningfully intertwined.

The Hereweka Harbour Cone property provides a unique and richly layered setting that enhances people's enjoyment, awareness, and understanding of environmental stewardship, conservation, sustainability, and heritage. It offers exceptional opportunities for community learning and for exploring the role of community-based land use in shaping the social, cultural, and environmental wellbeing of citizens.

The significance of Hereweka Harbour Cone arises from the following core values:

- The history, cultural significance, and enduring connection for mana whenua.
- The intactness and integrity of the archaeological landscape.
- The outstanding natural landscape and its distinctive landforms.
- The presence of areas with significant conservation value
- The diverse recreational opportunities and ease of access to open space for Dunedin residents.
- The potential of the property as a place for community learning and as an exemplar of sustainable land management practice.

Given the breadth and importance of these values, it is essential that the management of Hereweka Harbour Cone protects its natural, cultural, and heritage qualities while enabling appropriate public use and appreciation.

## **1.2 Vision**

The vision for the Hereweka Harbour Cone property is:

**To maintain the working landscape while enhancing the ecological, recreational, cultural, and heritage values of the Hereweka Harbour Cone property.**

This vision acknowledges the property's diverse and significant values and provides a clear direction and framework for the Hereweka Harbour Cone Management Plan, guiding the development of objectives, policies, and implementation actions.

## **1.3 Legal Descriptions**

The Hereweka Harbour Cone property, located at 1299 Highcliff Road, Dunedin, comprises multiple land parcels held under the following Records of Title: OT268/197, OT124/180, OT124/181, OT156/197, OT268/188,

OT268/194, OT268/195, OT268/196, OT44/78,

OT170/139, OT14B/1180.

In addition, a Conservation Covenant (COV 10588903.1) is registered against the land contained in RT 824231, being Dunedin City Council recreation reserve land. This covenant forms part of the legal framework applying to the wider Hereweka Harbour Cone property.

# Hereweka Harbour Cone – Land Parcels / Titles

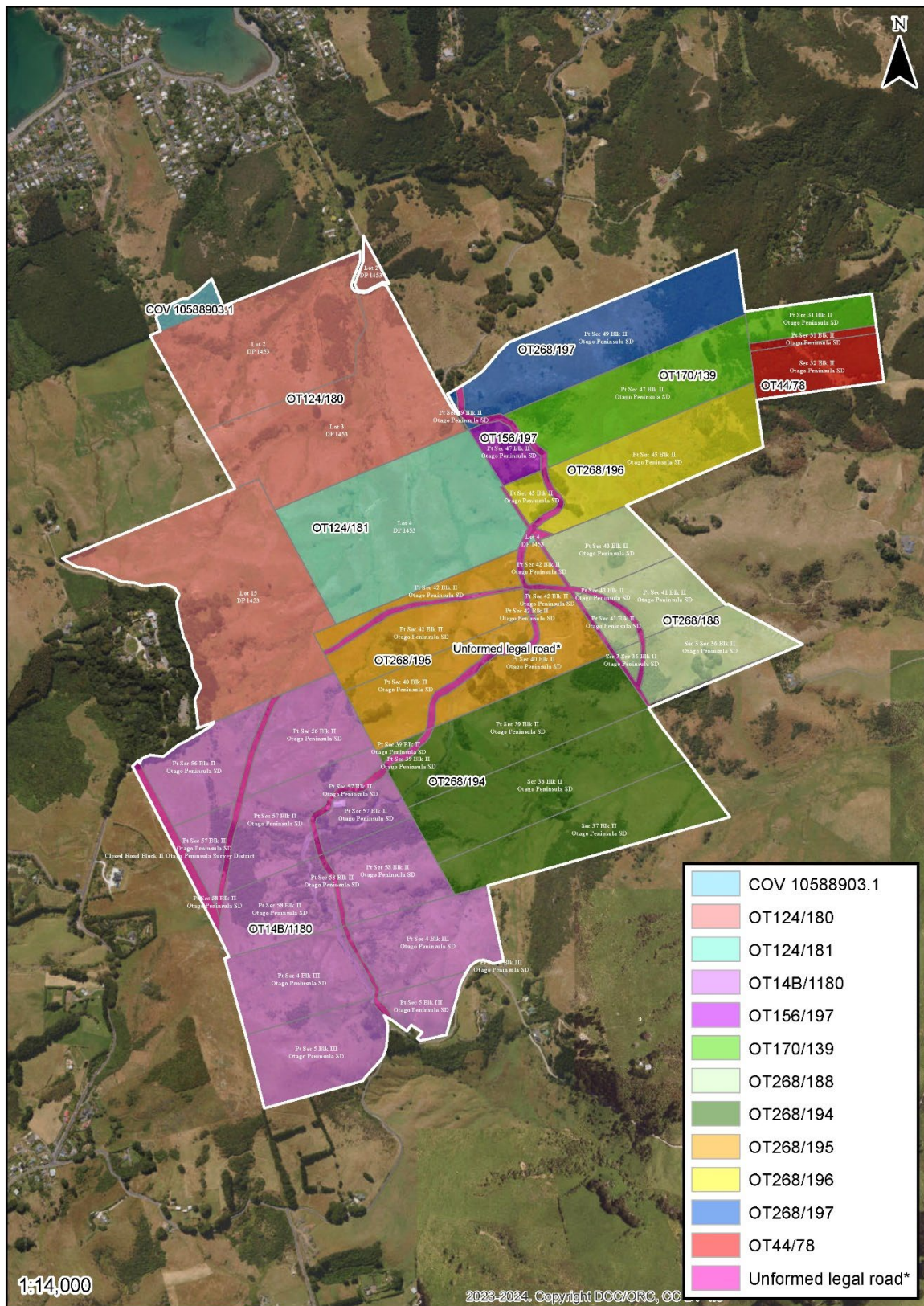


Figure 1. Hereweka Harbour Cone Land Parcels / Titles

## 1.4 Hereweka Harbour Cone — Key Historical Timeline

### Pre-Colonial era (centuries before 1831)

- The earliest known inhabitants of Ōtepoti were Kāti Hāwea and Te Rapuwai, who settled Te Wai Pounamu following migration from Polynesia. Later migrations included Waitaha, Kāti Māmoe, Kāti Kuri, and Kāi Tūhaitara, whose descendants became known as Kāi Tahu during the seventeenth and eighteenth centuries.
- **1700:** Tarewai battles with Kāti Māmoe .
- **1795:** Kāi Tahu has its first contact with sealers and whalers around 1795.
- **Pre-1831:** Extensive use of Otago Peninsula by Waitaha, Kāti Māmoe and Kāi Tahu. Hereweka functions as a prominent mauka/landmark within Muaupoko and is part of the wider mahika kai landscape (coastal and inland seasonal use).

### Early European contact and settlement context (1831–1862)

- **1831:** First permanent European settlement on the Otago Peninsula at the whalers' base at Weller's Rock.
- **1835:** Whaling and sealing stations begin to be established onshore under the authority of local rakatira
- **1840:** Korako and Karetai sign the Treaty of Waitangi on Takiharuru (Pilots Beach) at Pukekura
- **1844:** The Otago Association purchases the Otago Block (144,600 acres), establishing the framework for European settlement and land subdivision.

### Survey, roading, and first farm blocks (1863–1876)

- **1863:** Harbour Cone area is surveyed, and individual properties defined.
- **1864:** Walter Riddell is recorded as the first to take up property around Harbour Cone.
- **1865:** Sandymount lime industry begins. Walter Riddell helps James McDonald erect the first Sandymount lime kiln.
- **1866:** Robert Roger purchases 116 acres (sections 56–58, Block 11, Portobello Survey District).
- At the time, Highcliff Road had not yet been formed, indicating early and relatively isolated farm development.
- **1868–1869:** Highcliff Road is formed through the block, materially improving access and enabling greater farm consolidation and market connection.
- **1872:** William Larnach purchases three sections.
- **1872:** Sandymount School established (a key social anchor for the valley and farming community).

### Dairying expansion and rural industry (1877–1888)

- **1877:** William Leslie establishes a cooperative dairy factory on the slopes of Harbour Cone.
- **1879:** The factory reports that it produced 2.5 tons of cheddar cheese in 1879 (a significant marker of industrial rural activity in the valley).
- **1879:** Robert Roger advertises for pit sawyers to cut 10,000–12,000 feet of boards and scantlings ("near Sandy School, Peninsula").

- **1881:** The Harbour Cone cheese factory and three houses are destroyed by the October 1881 bushfire with extensive detail recorded in the Otago Daily Times.
- **1888:** After Larnach's death, the Camp Estate is surveyed for subdivision, marking a significant land tenure and development shift in the wider Harbour Cone landscape.

#### **Mature farmstead period and built heritage (c. 1885–1905)**

- **c. 1885:** Roger's byre is constructed.
- **1895:** Roger becomes a director of the Taieri and Peninsula Milk Supply Company, demonstrating integration into Peninsula dairy governance and supply systems.
- **1905:** Robert Roger dies suddenly while travelling to Dunedin (stroke or heart attack), reported in the Otago Daily Times.

#### **20th century: Continuity, transport change, and lime industry decline (1906–1939)**

- **1913:** A photograph shows the former Captain Leslie's house, with occupants identified (David and Ida Arnott family), illustrating continued settlement patterns and valley social networks.
- **1939:** Sandymount lime quarries and kilns are last used, marking the end of an important rural industrial phase.

#### **Mid-20th century**

- The Stewarts purchase Roger's farm and move from Stewarts Creek to live in Roger's house.
- Roger's house is noted as the only house on the block lived in until the 21st century, later leased by Akapatiki A Block.
- **2008:** Archaeologist Angela Middleton records the farmstead sites.

#### **DCC ownership and formal conservation planning (2008–2024)**

- **2008:** Dunedin City Council purchases the Hereweka Harbour Cone block. This is the key governance turning point from private farming block to public ownership and structured conservation management.
- **2009:** Peggys Hill Bush old growth forest is fenced to exclude grazing stock.
- **2010:** Stewarts Creek old growth forest is fenced to exclude grazing stock.
- **2012:** STOP (Save The Otago Peninsula) commences development of the Future Forest.
- **2019–2020:** Heritage Conservation Plan authors undertake systematic site visits to recorded sites, revising and updating Middleton (2008) records and adding additional sites.
- University of Otago archaeology work contributes to mapping and clearing sites, and specialist input informs stone structures and ruins.
- **2021:** Hereweka Harbour Cone Conservation Plan is completed, establishing the key heritage framework and chronology for the block.
- **2022:** Rutherford's Bush old growth forest is fenced to exclude grazing stock.
- **2025:** The Hereweka Track is established.

## 1.5 Management Zones

Given the size and complexity of the Hereweka Harbour Cone property, the effective protection and enhancement of its many values requires a structured and well-resourced approach. To support future operational management, the property has been divided into five management zones. These zones provide a practical framework for organising work, prioritising actions, and implementing tasks at a manageable scale.

The zones are not intended to operate in isolation. Rather, they form an integrated management system in which activities within individual zones support and reinforce outcomes across the wider property. By breaking down the landscape into clearly defined areas, staff and community partners can plan and deliver work more efficiently, ensuring that objectives are met progressively and coherently.

The basis for the five proposed management zones is illustrated in **Figure 2** below.

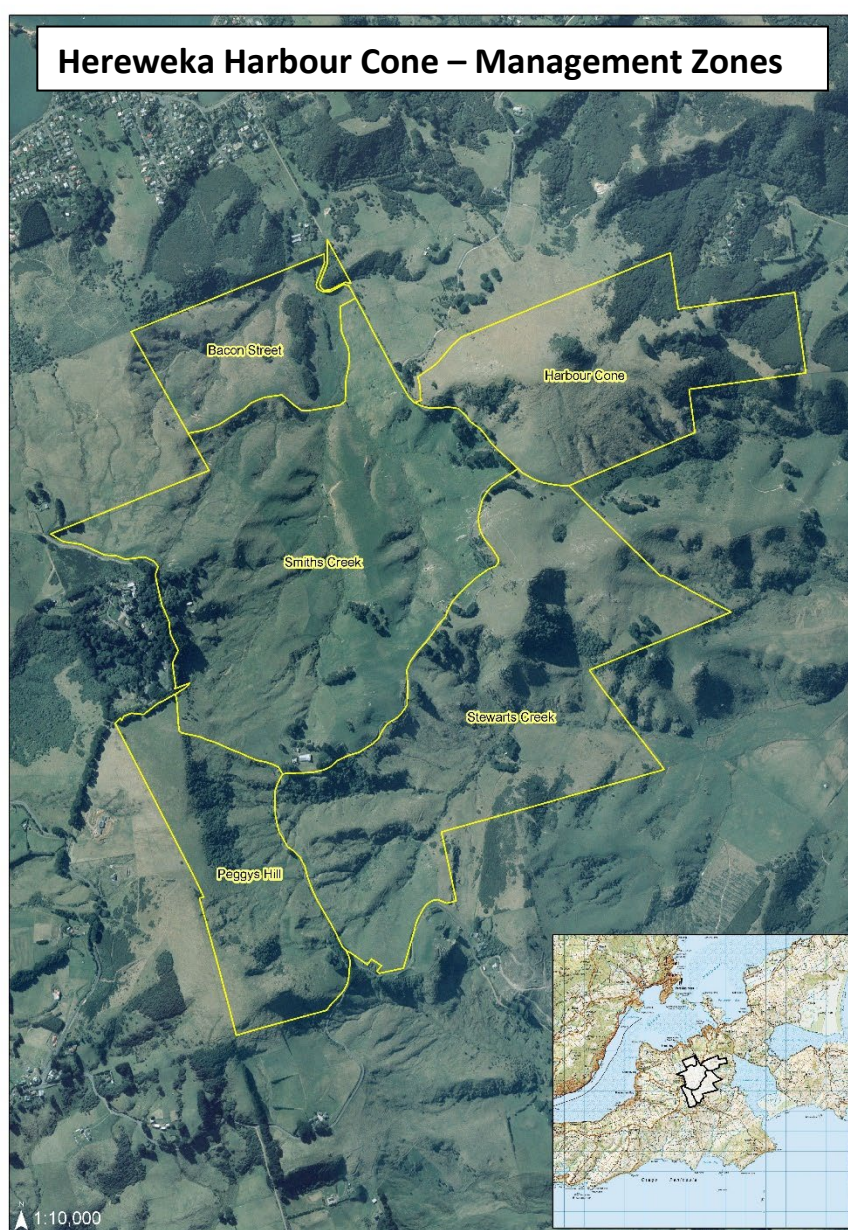


Figure 2. Hereweka Harbour Cone management zones

Short-term management actions and zone-specific implementation steps are outlined in the **Hereweka Harbour Cone Implementation Plan** (*implementation plan will be finalised alongside final plan*), which accompanies this Management Plan.

## 2.0 Purpose of the Management Plan

The whole-of-property Management Plan for the Hereweka Harbour Cone property establishes a coherent policy framework that strategically integrates the many objectives and expectations the Dunedin community holds for this landscape. It is intended as a guiding document for all partners and stakeholders involved in the property's use and care— including those responsible for day-to-day management, mana whenua partners, community groups, and organisations undertaking conservation, heritage, cultural, recreational, or educational projects.

Future decision-making will be directed by this Management Plan, ensuring that management activities, enhancement works, and public use are based on sound principles and remain aligned with the property's values and with the aims, objectives, and policies set out in this document.

The Management Plan provides clear guidance and direction on several key issues, including:

1. Ensuring the protection and perpetual visitor access, engagement, and enjoyment of the property and its values.
2. Minimising potential conflicts between the property's values and the various uses of the land.
3. Facilitating public access for a range of users and activities, while safeguarding high-value areas.
4. Supporting appropriate community involvement and stewardship.
5. Supporting engagement with mana whenua, incorporating relevant kōrero and cultural values, and giving regard to Te Taki Haruru in the management of the property.
6. Minimising built infrastructure and ensuring that any required structures are designed to protect and enhance the property's values.
7. Ensuring existing infrastructure is compatible with these values and remedying or mitigating adverse effects where necessary.
8. Ensuring any new infrastructure is consistent with long-term protection of landscape, natural, cultural, and heritage values.
9. Considering adaptive reuse of existing buildings where this contributes positively to the property and its values.

A key future priority is for Council to consider whether the land should be gazetted under the Reserves Act 1977 (the Act) and, if so, what reserve classification or combination of classifications would be most appropriate. Currently, only a small portion of the land is classified as reserve (see COV 10588903.1, page 9).

This Management Plan has been prepared to be broadly consistent with the purpose and principles of the Act, so that it can support any future transition to reserve status. Unless and until the land is gazetted and formally classified, it is not subject to the statutory requirements of the Act.

### 2.1 Development of the Management Plan

The development of the Management Plan has been undertaken to provide a clear, long-term framework for the management of the property, consistent with its landscape, ecological, cultural, heritage, recreational, and land-use values. The planning process has assisted in identifying

priorities, clarifying management intent, and resolving potential uncertainty or conflict between different uses, expectations, and stakeholder interests.

The initial 2012 Management Plan was developed through a comprehensive, community-centred process and prepared as if the land were a reserve administered under the Act, despite not being formally gazetted at that time. Community input shaped the plan through an open workshop and themed working groups addressing heritage, recreation, land use, and ecology, supported by specialist technical advice and iterative review by Dunedin City Council to ensure alignment with statutory obligations and operational considerations. Further public engagement and formal consultation under the Local Government Act 2002 informed the final plan adopted for the property in May 2012.

## **2.2 Aims, Objectives and Policies**

The aims, objectives and policies in this Management Plan provide the core framework for managing the Hereweka Harbour Cone property. They have been developed in response to the property's identified cultural, heritage, ecological, landscape, recreational and working landscape values, as well as the adopted vision statement and relevant statutory and non-statutory guidance. Their purpose is to support an integrated management approach that safeguards the property's significant values over the long term, while allowing appropriate use, enhancement, restoration, recreation, farming, community involvement and public engagement.

The Management Plan recognises that Hereweka Harbour Cone is a single interconnected landscape, rather than a collection of separate management areas or issues. For that reason, the aims, objectives and policies are intended to be read and applied together. Decisions about activities, development, infrastructure, restoration, access, events or other management actions should consider how different values interact, what cumulative effects may arise, and whether the proposal is consistent with the overall direction of the Plan. This ensures that individual actions do not undermine the property's wider purpose, significance or long-term management outcomes.

The management aims describe the long-term outcomes sought for the property and provide a strategic basis for assessing future proposals. The objectives identify the actions and approaches needed to achieve those aims, including how values should be protected, enhanced and managed. The policies then translate those objectives into practical guidance for decision-making and day-to-day management. Together, the aims, objectives and policies provide a consistent, transparent and adaptive framework for Council, any authorised governing body, partners and the community to guide the stewardship of the Hereweka Harbour Cone property over time.

## **2.3 Statutory Review Requirements**

This Management Plan has been prepared in accordance with section 41 of the Act, which requires administering bodies to prepare and maintain management plans for reserves and to keep those plans under continuous review.

Under the Act, a management plan must provide for the use and enjoyment, maintenance, protection, preservation, and overall control and management of the reserve in accordance with its classification and purpose.

The Act requires the management plan to be kept under continuous review and adapted as necessary to changing circumstances or increased knowledge. Circumstances that may prompt Council to consider a review or amendment include, but are not limited to:

1. Significant changes in reserve use, demand or visitor patterns
2. Changes in environmental, cultural or heritage values
3. Legislative or policy changes affecting reserve management
4. New information, such as ecological or archaeological assessments
5. Unforeseen management issues or opportunities

Where Council resolves to undertake a comprehensive review, it must follow the public notification and consultation procedures set out in the Act. Where a proposed change does not involve a comprehensive review, Council may determine whether public notification and consultation are appropriate, having regard to the nature and significance of the change.

## **2.4 Consideration of Other Documents**

### **Statutory and Policy Context**

Reserve management planning does not occur in isolation and must be undertaken within a broader statutory and policy framework. The preparation of this Management Plan has therefore been informed by a range of national, regional, and local planning documents and legislative requirements.

### **District Plan and Land-Use Planning Framework**

The Resource Management Act 1991 (RMA) requires the Council to prepare a district plan under section 73. The purpose of district plans is to assist the Council in carrying out its functions under section 31, in order to achieve the Act's purpose of promoting the sustainable management of natural and physical resources.

The Dunedin City Second Generation District Plan (2GP) guides land use and development across the city. The Hereweka Harbour Cone property at 1299 Highcliff Road is zoned Rural under the 2GP and is located partly within the Hill Slopes Rural Zone and partly within the Peninsula Coast Rural Zone. The property is also subject to multiple landscape, natural environment, and cultural overlays.

The Hereweka Harbour Cone landform is identified in the 2GP as an Outstanding Natural Feature (ONF), and a large part of the wider property lies within the Otago Peninsula Outstanding Natural Landscape (ONL) overlay. The property's lower slopes are located within the Inner Peninsula Bays Significant Natural Landscape (SNL) overlay. These overlays include rules and assessment criteria intended to protect against inappropriate development, and to ensure the values of these areas are maintained or enhanced. Further information is provided in Section 10 and Appendix A3 (Landscape Values) of the 2GP.

The property contains several areas mapped as Areas of Significant Biodiversity Value (ASBV). These areas are identified as C123 – Harbour Cone Parks land and are managed through the 2GP's indigenous biodiversity provisions. Further information is provided in Section 10 and Appendix A1.2 of the 2GP.

Parts of the property are also covered by two Wāhi Tupuna Mapped Areas, consisting of Pukemata (Harbour Cone) and the Upper Slopes and Peaks of the Otago Peninsula. Wāhi tupuna are landscapes and sites that embody the ancestral, spiritual and religious traditions of all the

generations prior to European settlement. Certain activities in Wāhi Tupuna mapped areas are managed to ensure that the identified values of these areas are protected. Further information is provided in Section 14 (Mana whenua) and Appendix A4 of the 2GP. As the property is within a Wāhi Tupuna Mapped Area, mana whenua engagement is essential when plans or management processes affecting Hereweka Harbour Cone are developed or amended.

Hereweka Harbour Cone is also covered by the 2GP archaeological alert layer, which identifies places with a high likelihood of containing archaeological remains.

A small number of watercourses on the property are mapped in the 2GP as Esplanade Strips, which are a mechanism used to protect riparian margins adjacent to certain waterways (refer to Section 10 of the 2GP).

A map showing Hereweka Harbour Cone 2GP zones and features is included in **Appendix 2**.

### **Reserves Management Planning Framework**

The Dunedin City Council Reserves Management Plan – General Policies (2025) has been used to inform the development of this plan and applies as the default policy framework for matters not explicitly addressed within the Hereweka Harbour Cone Management Plan. The General Policies provide city-wide direction for the day-to-day administration, use, development, and protection of Council-managed parks and reserves, including matters such as access, structures, commercial activities, leases, licences, and community use.

Where specific provisions are included in this Management Plan, they take precedence over the General Policies for the Hereweka Harbour Cone property.

### **Te Taki Haruru – DCC's Māori Strategic Framework 2025**

Te Taki Haruru – DCC's Māori Strategic Framework was adopted to guide how the Dunedin City Council engages with mana whenua and Māori communities and embeds mātauraka Māori and intergenerational wellbeing into Council planning, decision-making, and implementation. The framework was created using the principles and values of mana whenua and mātauraka Māori in Ōtepoti Dunedin. At its core, the framework calls for strengthened connections between people, place, and environment and sets out principles and values to support culturally grounded outcomes across civic strategies and policies. Reading the Hereweka Harbour Cone Management Plan alongside Te Taki Haruru ensures that management actions for the mauka — including cultural interpretation, environmental restoration, visitor engagement, and governance processes — are aligned with Council's commitments to meaningful partnership with mana whenua, recognition of takata whenua values, and the promotion of Māori wellbeing and identity within Ōtepoti Dunedin. The Hereweka Harbour Cone Management Plan applies across all four pou (pillars) of Te Taki Haruru - Autūroa, Auora, Autikaka, and Autakata – with particular alignment to the environment, cultural, and social key directions of those pou, and the opportunity to align with some of the economic key directions.

### **Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020**

Provides the national policy framework for protecting and restoring indigenous biodiversity and is directly relevant to the management of Hereweka Harbour Cone. The Strategy sets a long-term

vision of thriving indigenous ecosystems, strengthened ecological resilience, and active partnership with takata whenua, with priorities including landscape-scale restoration, predator control, ecosystem connectivity, and community stewardship. Its emphasis on mātauranga Māori, integrated management, and adaptive practice aligns closely with Hereweka Harbour Cone's objectives for ecological restoration, pest management, and cultural recognition. Importantly, Te Mana o te Taiao is supported by a national monitoring and reporting framework that tracks biodiversity outcomes and system performance over time. This monitoring focus reinforces the need for measurable indicators, baseline data, and ongoing evaluation within the Management Plan to ensure restoration actions are evidence-based and contribute to broader national biodiversity goals.

### **Kāi Tahu statutory acknowledgements and cultural associations**

The Ngāi Tahu Claims Settlement Act 1998 contains statutory acknowledgements and other mechanisms that formally recognise Ngāi Tahu cultural, spiritual, historic and traditional associations with specified areas.

Schedule 103 of the Ngāi Tahu Claims Settlement Act records the statutory acknowledgement for Te Tai o Arai Te Uru—the Otago Coastal Marine Area. Although the statutory area does not include the Hereweka Harbour Cone property itself, the acknowledgement provides relevant cultural and environmental context, particularly where activities on the property may affect downstream or coastal environments.

A ki uta ki tai (from the mountain to the sea) approach recognises the interconnectedness of the land and sea and supports consideration of how the management and use of Hereweka Harbour Cone may affect the wider environment, including the surrounding coastal area.

The statutory acknowledgement has specific legal effects under the Ngāi Tahu Claims Settlement Act. These include requirements for consent authorities and certain other decision-makers to have regard to the acknowledgement in the circumstances specified in that Act. It does not impose a general requirement to have regard to the acknowledgement in every Council decision or when preparing this Management Plan.

The statutory acknowledgement is identified in **Appendix 7**. Together with engagement with mana whenua and other relevant information concerning Kāi Tahu values and associations, it has informed the management approach adopted for Hereweka Harbour Cone.

### **Zero Carbon Plan**

Dunedin City Council's Zero Carbon Plan is the Council's commitment to significantly reduce greenhouse gas emissions from its own operations and help lead the wider city transition to a low-emissions future. The programme focuses on energy efficiency, renewable energy, sustainable transport, waste reduction, and increasing natural carbon sequestration through land management and restoration. In the context of Hereweka Harbour Cone, the plan is relevant through opportunities for indigenous revegetation, improved catchment health, erosion control, biodiversity restoration, and land management practices that can contribute to long-term carbon storage while protecting the property's outstanding landscape and ecological values.

### **Archaeological and Heritage Protection**

All archaeological sites in New Zealand are protected under the Heritage New Zealand Pouhere Taonga Act 2014, regardless of whether they are recorded or scheduled in a district plan. An archaeological site is defined as any place associated with pre-1900 human activity that may be investigated through archaeological methods.

Within the Hereweka Harbour Cone property, more than forty historic archaeological sites and structures have been identified and recorded in the New Zealand Archaeological Association Site Recording Scheme, based on surveys and assessments undertaken by Walton (1999) and Middleton (2008). These sites include farmsteads, dry-stone walls, historic tracks, lime-burning infrastructure, and associated features. While many of these sites are not individually scheduled in the District Plan, they are nevertheless protected under national legislation, and any modification or disturbance requires an archaeological authority from Heritage New Zealand Pouhere Taonga.

### **Non-Statutory Information Sources**

In addition to statutory documents, this Management Plan has been informed by a range of non-statutory reports, technical assessments, and historical studies. These sources are referenced in the bibliography and provide important contextual, ecological, archaeological, and historical information to support informed and integrated management of the Hereweka Harbour Cone property.

## 3.0 Hereweka Harbour Cone Property Values

### 3.1 Kāi Tahu Values

Hereweka Harbour Cone is a culturally significant mauka within the Otago Peninsula and forms part of the ancestral cultural landscape of Kāi Tahu, with Te Rūnanga o Ōtākou holding mana whenua and kaitiakitaka in this area. Kāi Tahu have a long-standing association with Otago Peninsula and its prominent landforms through customary use, oral tradition, and whakapapa, reflecting an enduring relationship between people, land, and sea.

Traditionally, permanent Kāi Tahu settlements were concentrated (but not solely) around the coast and harbours of the Peninsula, reflecting reliance on the marine environment for transport and access to abundant mahika kai resources. Numerous mahika kai sites were distributed across the Peninsula, enabling seasonal movement throughout the rohe to gather food and materials and to support toolmaking and trade. This practice of seasonal mobility was central to Kāi Tahu lifeways and to the sustainable use of resources across the wider cultural landscape.

The tidal bays and estuaries of the Otago Peninsula and Otakou Awa (Otago Harbour) provided rich food resources, including tuaki (cockle), pātiki (flounder), and pāteke (duck). Other species harvested included hoka (red cod) and kōkiri / puamorua (leather jacket). Marine mammals were also important seasonal resources, with pakake (sea lion) being sought in accordance with customary practice. These resources supported both permanent settlements and temporary camps across the Peninsula and reinforced the close relationship between land-based and marine environments.

The name Hereweka, commonly translated as “catch weka” or “swift weka,” reflects the importance of the weka as a customary food resource and reinforces the cultural association between the landform and food-gathering practices. Prior to widespread clearance, the slopes of the Peninsula, including Hereweka, were cloaked in native forest and scrub that supported birdlife and other resources. Māori land-use practices shaped these environments while maintaining their productivity, with later European land-use change resulting in significant alteration of the cultural landscape.

Hereweka also features in Kāi Tahu oral tradition, notably in accounts associated of Ōtākou tupuna Tarewai. According to tradition recorded by Te Rūnanga o Ōtākou and in published sources, Tarewai escaped captivity following conflict with Kāti Māmoe in the late eighteenth century and sought refuge in the dense bush of the Otago Peninsula. Hereweka is identified as the mauka where Tarewai hid and recovered. This narrative strengthens the cultural and historical significance of Hereweka as a place of refuge, endurance, and connection to the whenua through tīpuna.

While no Māori archaeological sites have been formally recorded within the Hereweka Harbour Cone property itself, numerous archaeological sites are recorded elsewhere on the Otago Peninsula in proximity to Hereweka, including at Little Papanui, Puketuroto (Hoopers Inlet), Makahoe (Papanui Inlet and Beach), Pīpikāretu, Pukekura (Taiaroa Head), and Tarewai Point. These sites have yielded material evidence of long-term Māori occupation and resource use, including moa, seal, bird, and fish remains. Coastal erosion continues to expose additional archaeological material in some areas of the Peninsula, highlighting the dynamic and evolving nature of the archaeological record.

The absence of recorded archaeological sites within the Hereweka property does not diminish its cultural significance. Māori cultural landscapes were understood and used as interconnected systems, rather than as isolated sites. Cultural values are not limited to locations where physical evidence has been recorded, and landscapes associated with pūrākau, customary use, and

prominent natural features may retain cultural sensitivity regardless of the presence or absence of identified archaeological remains.

As a prominent mauka overlooking Ōtākou Awa, Hereweka holds cultural significance beyond its historical use as a resource area. Within Kāi Tahu worldview, mauka are understood as ancestral presences that contribute to identity, orientation, and a sense of place within the wider landscape. Hereweka continues to hold cultural value for Kāi Tahu today as part of an enduring cultural landscape, contributing to contemporary expressions of identity, whakapapa, and kaitiakitaka.

### **3.2 Historic Values**

The post-colonial historic value of the Hereweka Harbour Cone property lies in its largely intact archaeological landscape, which is representative of nineteenth- and early twentieth-century settlement patterns on the Otago Peninsula. It has been noted as a relict landscape of national importance. This landscape reflects both the small ten-acre dairy farms that once dominated the area and the larger estate developed by William Larnach.

Following the 1844 Otago-acquisition from Kai Tahu, the Hereweka Harbour Cone area was subdivided into land titles in 1863. Many of the dry-stone walls present on the property were constructed along these original survey boundaries and remain clearly legible today.

At the time of subdivision, the land was heavily forested. Early European settlers undertook extensive forest clearance to establish pasture for farming. Settlement patterns were characterised by small family-run dairy holdings operating within a largely subsistence-based economy. Farmsteads typically included a dwelling, dairy, cow byre for overwintering stock, and supporting gardens. Households commonly maintained a small number of cows, poultry, and pigs, with surplus produce occasionally sold.

The opening of the Sandymount creamery in 1892 marked a significant shift in dairy operations, enabling farmers to deliver milk for centralised processing in Dunedin. Daily travel to the creamery became a focal point of community interaction and a defining aspect of daily life, despite the time and effort required to transport milk over challenging terrain.

At its peak, the Sandymount creamery served approximately 30 dairy farms. Over time, dairy farming declined, due to the unsuitability of dairy farming on this land, and was progressively replaced by sheep farming, with only a small number of dairy operations remaining by the early twentieth century.

The upper reaches of Sandymount Road, within the Hereweka Harbour Cone property boundary, formed the core of the Harbour Cone community's infrastructure and industrial activity. Beyond the property boundary, key community facilities included the Sandymount School, limestone kilns, and the Sandymount creamery. Within the property itself were the Sandymount post office and a lime crushing plant, both of which played important roles in community life.

William Larnach began acquiring land on the Peninsula in 1870 and by the mid-1880s had consolidated holdings into what became known as the Camp Estate. Within the Hereweka Harbour Cone property lies Larnach's "Model Farm," constructed as an exemplar of contemporary dairy farming. Accessed through a grand arched entranceway, the farm complex included a byre, stable, barn, dairy, and the farm manager's house, forming the operational heart of Larnach's estate.

Larnach is also likely to have constructed, or commissioned the construction of, a number of the stone boundary walls on the property and was an early adopter of wire fencing. Following his death in 1898, the Camp Estate was progressively subdivided and sold to other landowners.

### **3.3 Landscape and Land Use Values**

The elevated position of the Hereweka Harbour Cone property, together with its role as a backdrop to many surrounding settlements and coastal areas, contributes significantly to the character, legibility, and sense of place of the wider Otago Peninsula landscape. The distinctive conical form of Hereweka Harbour Cone is a prominent landmark and landform of high significance. It is widely recognised as an iconic element of Dunedin's landscape and features prominently in artworks and visual representations of the Peninsula.

The largely uniform pasture cover that characterises the property allows the underlying landform to be clearly expressed. Rocky outcrops, remnant tree stumps from earlier forest clearance, and the contours shaped by volcanism and erosion remain readily visible. This clarity enables the geological history of the landscape to be read directly from the land itself. Remnant native bush areas, generally confined to the steepest or wettest slopes unsuitable for grazing, further reinforce landform patterns and contribute to the perceived naturalness of the landscape.

The history of small-scale dairy farming is similarly legible. The continuity of pasture cover highlights historic shelter plantings, dry-stone walls, farm tracks, and building ruins, which together form a coherent and highly readable cultural landscape.

The continuation of pastoral farming plays a key role in maintaining the open character and large-scale patterns of the landscape. Appropriate pastoral use is therefore important not only for preserving landscape character, but also for supporting a broader range of ecosystem services and environmental outcomes.

One of the most significant values of the Hereweka Harbour Cone property is its potential to demonstrate a multi-functional approach to land use. This model seeks to deliver a range of interrelated benefits, including food production, landscape character, clean water, flood mitigation, water management, wildlife habitat, protection of cultural and heritage features, and strengthened relationships with local communities.

As a community-owned asset, the property provides a valuable opportunity to explore how land use can contribute to social and cultural wellbeing. In an increasingly carbon-constrained world, priorities such as health, access to nature, open space, local recreation, and local food production have increasing relevance alongside, and not in opposition to, traditional land uses. Under a multi-functional framework, these outcomes are mutually reinforcing and together form a resilient and integrated landscape.

The property also provides an important setting for increasing public awareness and understanding of environmental, conservation, sustainability, and heritage issues. Community-led initiatives that enhance these values should be encouraged where they are consistent with the purpose and objectives of this Management Plan and deliver tangible benefits to the local community.

### **3.4 Ecological Values**

The Hereweka Harbour Cone property contains five areas of indigenous forest that have been assessed as ecologically significant (Wildland Consultants, 2008a–e). Two of these areas are located

on Harbour Cone, two within the upper reaches of Stewarts Creek, and one on the northeast face of Peggys Hill. Additional areas of kānuka treeland and forest occur in the northern part of the property, adjoining more extensive indigenous forest on neighbouring land (refer **Appendix 3**). Smaller patches of broadleaved forest and shrubland are also scattered across the property.

The property supports a range of indigenous species, including several that are locally important or nationally classified as At Risk. Notably, the site contains moist forest habitat that is uncommon on the Otago Peninsula and supports a high diversity of indigenous fern species.

The indigenous forest remnants provide important food and habitat resources for native bird species and form part of a wider network of forest fragments across this part of the Peninsula. Their proximity to larger forest areas on adjoining land, including Dicksons Hill and the northern and eastern flanks of Hereweka / Harbour Cone, facilitates the movement of indigenous flora and fauna between habitats and enhances ecological resilience.

The lower reaches of Smiths Creek support five indigenous fish species (Banded kōkopu (*Galaxias fasciatus*), Īnanga (*Galaxias maculatus*), Redfinned bully (*Gobiomorphus huttoni*), Longfin tuna (eel) (*Anguilla dieffenbachii*), Shortfin tuna (eel) (*Anguilla australis*), making it a significant freshwater habitat. While stream conditions across the property are generally good, opportunities exist to further enhance ecological values through improved riparian management and the removal or mitigation of barriers to fish passage.

The principal threats to ecological values on the property are stock browsing and weed invasion. While three significant forest patches have been fenced to exclude stock, other areas remain unfenced and are experiencing ongoing decline as a result of grazing pressure. Woody weeds are present in most indigenous forest areas and require active management. There is considerable potential for further indigenous vegetation restoration across the property, building on recent work undertaken within fenced areas. Future restoration efforts should be prioritised where ecological gains are greatest.

### **3.5 Recreation and Public Appreciation Values**

The Hereweka Harbour Cone property is widely regarded as a special place by Otago Peninsula residents and the wider Dunedin community. Its expansive open landscape, elevated position, and rural character are central to its public appeal.

The public is drawn to the property because it offers a rare opportunity to explore the interior of the Peninsula in a setting where public access is actively supported. The scale of the property, the absence of modern development, grazing stock, and long uninterrupted views contribute to a strong sense of openness and remoteness. From higher points, panoramic views extend across the Peninsula interior, Otago Harbour, Hoopers Inlet, and the open ocean.

A distinctive aspect of the property is the presence of historic stone walls, ruins, and mature macrocarpa trees. On closer inspection, historic roads, farmsteads, boundary features, hedgerows, and orchard remnants reveal layers of past settlement. The ability to physically explore and interpret this heritage landscape offers a rich and engaging visitor experience.

The property's proximity to urban Dunedin makes it readily accessible, and for residents of Broad Bay and Portobello it lies directly on their doorstep as a valued community asset. A network of multi-use tracks supports a range of recreational opportunities, while infrastructure has been designed to facilitate access in a manner that protects the property's values.

Flatter areas near entrances and points of interest provide opportunities for passive recreation and are accessible to people with reduced mobility or limited time. In contrast, steeper terrain and extended track networks cater to visitors seeking more physically demanding experiences.

Encouraging public access supports greater appreciation of the property's landscape, cultural, heritage, and ecological values. In turn, this fosters a sense of stewardship and shared responsibility. The scale and quality of the landscape, combined with opportunities for recreation and community involvement, contribute positively to visitor wellbeing and quality of life.

The open rural countryside, expansive views, rich cultural layers, and sense of isolation offered by Hereweka Harbour Cone combine to create a powerful visitor experience—one that evokes both solitude and exhilaration, and a strong connection to a place of significance.

## 4.0 Hereweka Harbour Cone Management Zones

### 4.1 Bacon Street Zone

The Bacon Street zone covers the lower reaches of Smiths Creek and the adjacent gullies and western hill slopes. It includes a mosaic of lowland alluvial flats, riparian margins, gullies, and drier hill-slope landforms. A narrow strip of kānuka forest lines parts of the Smiths Creek riparian corridor, while larger kānuka treeland patches occupy the surrounding slopes. These treeland areas are currently subject to stock pressure, although natural kānuka regeneration is occurring on the drier hill slopes below the main stands. Scattered gorse is present across the slopes, forming mixed scrub with regenerating indigenous vegetation along parts of the northern boundary. The alluvial flats are largely pasture with rush-land in wetter depressions, and sedge-lands occupy parts of the wetter gully floors. The lower reaches of Smiths Creek support five indigenous fish species making it a significant freshwater habitat. Riparian planting has been undertaken to enhance and protect their habitat.

Proximity to the Broad Bay community makes this zone one of the most accessible and popular parts of the property for informal recreation. Historically, it has served as a convenient and attractive destination for picnics, day trips, and local gatherings. Today, open space, shelter, and gentle gradients support a range of everyday recreational activities.

The Future Forest loop-track provides visitors with an opportunity to experience a regenerating native forest landscape that has been progressively established through extensive community-led planting and restoration. The surrounding catchment has been fenced to exclude stock, with large areas of former pasture now replanted in native trees and shrubs, particularly along stream margins and steeper slopes, creating a developing riparian and hillside forest system. A small community orchard has been established near the track, and new boardwalks and creek crossings now enable safe access through wetter areas, providing visitors with an easily accessible walk in which they can observe different stages of native regeneration.

A formal marked track connecting to Highcliff Road and the wider track network also begins in the Bacon Street zone. Future opportunities include developing a multi-use track that could accommodate walking, mountain-biking, and horse riding.

The zone's accessibility, sheltered aspect, and relatively gentle terrain make it an ideal location for community-led initiatives. Potential restoration activities include trialling best-practice approaches for fostering kānuka regeneration and undertaking native planting to restore podocarp-rich forest and indigenous riparian vegetation.

### Bacon Street Zone – Summary

#### Key Values

- Riparian kānuka forest along Smiths Creek
- Smith Creek - fresh water creek supporting indigenous fish population
- Lowland alluvial flats, gullies, and wetland pockets (rush-land and sedge-land)
- Accessible open space near Broad Bay

- Popular historical community recreation area

#### Issues / Threats

- Stock browse in kānuka treeland
- Scattered gorse and exotic scrub
- Pest plants that have established
- Wetland areas vulnerable to erosion

#### Management Priorities

- Protect and enhance riparian vegetation
- Manage scattered gorse and support natural kānuka regeneration
- Surveillance and control of pest plants
- Maintain open pasture areas where appropriate while gradually improving ecological resilience
- Develop accessible recreational opportunities including walking circuits and potential multi-use tracks

#### Opportunities

- Facilitate appropriate community-based restoration and education initiatives.
- Establishment of a multi-use track (walking, biking, horse riding)
- Establishment of accessible tracks, suitable for wheelchairs and strollers
- Gateway node for wider visitor network

## 4.2 Smiths Creek Zone

The Smiths Creek zone encompasses the remainder of the Smiths Creek catchment below Highcliff Road. It is dominated by dry hill-slope landforms interspersed with gullies. Indigenous vegetation is scarce, with the majority of the zone being maintained as pasture. Small pockets of dry broadleaved forest persist on steep slopes and within gullies and represent important ecological remnants that require priority fencing and protection.

Stands of exotic trees, including sycamore, occur around the zone margins, and sycamore is actively spreading upslope. Hawthorn is scattered throughout the catchment, while gorse remains relatively sparse. A high-priority invasive species in this zone is Chilean flame creeper, which is present in several locations and requires active control.

The cultural landscape values within this zone are particularly strong. The uniform pasture cover highlights historic farming patterns, making relic shelter plantings, stone walls, farm tracks and building ruins highly legible. This zone also contains the historically important site of Larnach's model dairy farm, a key heritage feature.

Extensive historical clearance of indigenous forest and subsequent farming practices have contributed to widespread erosion across these slopes. Re-establishing woody vegetation is therefore an ecological and landscape priority, both for slope stabilisation and for improved

waterway health. As riparian restoration progresses downstream in the Bacon Street zone, there is an opportunity for a catchment-scale, staged revegetation programme extending upstream through the Smiths Creek catchment. Over time, this approach would support improved habitat for indigenous fish species and enhance ecological connectivity across the property.

Careful forest management within this zone will help enhance biodiversity, protect waterways, and slow erosion. Over time, restored areas will create a cohesive framework of woody vegetation that provides ecological structure and landscape context within an otherwise pastoral setting.

Given the proximity of the zone to nearby Peninsula settlements, enhancing recreational opportunities is also a priority. The presence of large open areas that are generally free from highly sensitive ecological or historic features creates opportunities for a broader range of recreation users, including horse riders and mountain bikers, alongside walkers.

The woolshed located on the ridge between the Smiths and Stewarts Creek catchments remains central to the property's farming operations due to its strategic position. This location also presents future potential as a visitor hub, supporting environmental and outdoor education, community learning, and the provision of basic visitor amenities.

### **Smiths Creek Zone – Summary**

#### **Key Values**

- Intact archaeological landscape (shelter plantings, stone walls, homestead sites)
- Historic site of Larnach's model dairy farm
- Small remnants of dry broadleaf forest

#### **Issues / Threats**

- Widespread erosion on dry slopes
- Sycamore, hawthorn, and Chilean flame creeper spread
- Establishment of banana passionfruit and Bomarea
- Minimal surviving indigenous vegetation
- Stock access to vulnerable forest remnants
- Increase in rabbit numbers

#### **Management Priorities**

- Fence and protect indigenous remnants
- Targeted control of invasive woody weeds and pest vines
- Slope-stabilisation planting (woody vegetation)
- Strengthen riparian restoration up the catchment

#### **Opportunities**

- Catchment-wide riparian restoration linking to Bacon Street
- Enhancement of recreational opportunities such as horse riding and mountain biking

- Interpretation of historic farm landscapes
- Demonstration of erosion-control replanting techniques

### **4.3 Hereweka Harbour Cone Zone**

This zone encompasses the summit and moderately steep flanks of Hereweka Harbour Cone, including associated ridges and gully heads extending eastward. The landform is characterised by dry hill slopes and the highly distinctive conical summit. Hereweka Harbour Cone is a major cultural landmark and landscape feature, with high levels of significance that require careful protection from adverse activities.

This zone contains two significant stands of indigenous broadleaved forest and the most extensive kānuka forest on the property. Broadleaved forest remnants are currently affected by stock browse, while kānuka is regenerating naturally in rough pasture on the southern and eastern flanks. Fencing part of the cone's western flank to exclude stock may assist natural kānuka regeneration and enable kānuka cover to extend towards the summit. Scattered gorse is present across the grassland slopes and is actively invading from the southern boundary. Excluding stock from the broadleaved forest remnants is an ecological priority, supported by targeted restoration planting in fenced gaps, where appropriate.

Hereweka Harbour Cone already attracts large numbers of visitors, drawn by expansive views across valleys, the Peninsula, and the open sea, and by the strong presence of an intact cultural landscape. Opportunities exist to strengthen recreational connections, including linking existing tracks with neighbouring routes toward Hoopers Inlet and Portobello to create walking circuits between Broad Bay and Portobello.

#### **Hereweka Harbour Cone Zone – Summary**

##### **Key Values**

- Iconic conical summit and major landscape landmark
- Kāi Tahu cultural associations and oral history
- Significant broadleaved forest stands and extensive kānuka forest

##### **Issues / Threats**

- Stock browsing in broadleaved forest and regenerating kānuka
- Increasing gorse presence on slopes
- Establishment of pest vines, including banana passionfruit and Bomarea
- High visitor pressure due to popularity
- Increase in rabbit numbers

##### **Management Priorities**

- Exclude stock from broadleaved forest remnants where applicable
- Restore broadleaved forest gaps

- Control gorse advancing from southern margins
- Manage recreation impacts (track durability, erosion)

#### Opportunities

- Provide interpretive information that reflects Kāi Tahu narratives, values, and connections with the site
- Protect and frame long views, open vistas, and the heritage landscape character
- Provide targeted fencing to support and protect areas of natural kānuka regeneration as part of a 'rewilding' trial

### 4.4 Peggys Hill Zone

The Peggys Hill zone includes the steep eastern slopes, terraces, and the relatively flat summit of Peggys Hill above Highcliff Road. Unlike many other parts of the property, this area has a moist hill-country character, with several springs emerging on the eastern face and multiple areas of visible landslide activity. A scatter of sub-fossil tree trunks on the summit likely represents former Hall's tōtara forest cover.

The zone contains a large and ecologically important stand of moist indigenous broadleaved forest on the eastern slopes and a smaller stand to the south. Gorse has extensively invaded non-forest areas and has previously been subjected to aerial control, which has also affected regenerating native trees. Pasture dominates the remaining lands, with scattered exotic trees such as macrocarpa and radiata pine.

The largest area of indigenous forest—and extensive surrounding grassland—has been fenced to exclude stock. An ecological restoration programme began here in 2009 aiming to restore indigenous forest cover in pastoral areas, with further phases planned. The protection of this site and community involvement in planting has fostered a strong sense of local stewardship.

The fenced area, being insulated from farming operations, provides an ideal space for trialling ecological restoration techniques, including building soil organic matter and carbon. These activities will also help protect the catchment's headwaters.

The Peggys Hill ridgeline can be accessed from Camp Road and provides 360-degree views across the Otago Peninsula and surrounding ocean. However, tracks along the ridgeline and connecting links to Smiths Creek are poorly marked and may require improved wayfinding and maintenance to enhance visitor safety, accessibility, and the overall recreation experience.

#### Peggys Hill Zone – Summary

##### Key Values

- Moist hill-country character with springs and wetlands
- Significant moist broadleaved forest remnant
- Evidence of historic forest (sub-fossil Hall's tōtara)
- Active community restoration area

##### Issues / Threats

- Extensive gorse invasion
- Establishment of pest plants
- Landslide-prone terrain
- Vulnerability of headwaters

#### Management Priorities

- Continue stock exclusion fencing
- Surveillance and control of Chilean flame creeper and other pest plants
- Support and expand ongoing restoration planting
- Trial restoration methods (direct seeding, soil-building, carbon initiatives)
- Protect headwaters and hydrological features through land stabilisation initiatives

#### Opportunities

- Community restoration project and demonstration area
- Ridge tracks offering 360° views and educational value
- Linking restoration with Stewarts Creek ecological programme
- Increase recreation value through improvements to track condition and wayfinding.

### 4.5 Stewarts Creek Zone

The Stewarts Creek zone comprises the Stewarts Creek catchment below Highcliff Road. While the lower valley floor includes narrow alluvial flats, the majority of the zone is characterised by steep hill slopes, with gentler terrain only in the upper Battery Creek headwaters. The upper tributary directly below Peggys Hill supports moist forest, while most of the catchment consists of dry hill slopes.

Pasture dominates this zone but is interspersed with significant stands of moist and dry indigenous broadleaved forest, as well as scattered patches of shrubland. Moist forest is confined to the upper catchment; elsewhere, dry broadleaved forest—often with kōwhai in the canopy—occupies slopes. Gorse is widespread, including almost continuous linear strips occupying the low-elevation riparian margins. Gorse has previously been aerially controlled in parts of the zone. Rock outcrops are present, along with groves of mature macrocarpa and radiata pine. The moist forest remnant in this zone has been fenced to exclude stock and is part of the wider ecological restoration programme linking with Peggys Hill. The 5.7 ha of dry forest shrublands known as Rutherford’s Bush was fenced to exclude stock in 2022.

More distant from Broad Bay and Portobello, the Stewarts Creek zone evokes a sense of rural remoteness. Several archaeological features heighten the cultural significance of the area, including nearby lime kilns, the remains of the Stewart family homestead, and the enclosed Rutherford farmstead. Rutherford’s Road, a historic stone-lined route, is still intact and provides an inviting entry point for recreational users exploring the Peninsula’s past. The combination of strong landforms, natural vegetation, and cultural heritage makes this zone particularly suitable for reflective and immersive visitor experiences.

A community-led ecological restoration project began in this zone in 2010 and continues to expand. Stock exclusion along riparian margins, together with restoration planting, is progressively establishing a strong vegetated framework that supports freshwater quality, improves riparian function, and strengthens the resilience of indigenous fish habitat. The accessible and relatively flat valley floor may also be suitable for carefully managed native tree woodlots, where these are designed and maintained as part of the broader restoration framework. Any woodlot activity should protect waterways, enhance indigenous biodiversity, and contribute to catchment-wide ecological restoration outcomes, rather than operate as a conventional production forestry activity.

### **Stewarts Creek Zone – Summary**

#### **Key Values**

- Significant moist and dry broadleaved forest, both undergoing rapid regeneration.
- Remote rural character and strong landforms
- Archaeological sites: Stewart house ruins, Rutherford farmstead, lime kilns (adjacent)
- Historic formed route (Rutherford's Road)

#### **Issues / Threats**

- Extensive gorse, especially along riparian margins
- Establishment of pest vines, including banana passionfruit and Bomarea
- Stock impacts on unfenced indigenous areas
- Erosion on steep slopes
- Spread of exotic pines and macrocarpa

#### **Management Priorities**

- Continue riparian fencing and restoration
- Control linear gorse infestations along waterways
- Continue programme of Chilean flame creeper control in affected areas
- Surveillance and control of plants
- Re-establish woody vegetation for erosion control
- Protect forest remnants and expand ecological buffers

#### **Opportunities**

- Native woodlots for carbon sequestration, land stabilisation, waterway protection, and biodiversity
- Enhanced recreational use of Rutherford's Road as a heritage route
- Catchment-scale restoration linked with Peggys Hill
- Reflective, nature-based visitor experiences

## 5.0 Legal Protection, Governance and Administration

The Hereweka Harbour Cone property was purchased by the Dunedin City Council to protect its outstanding landscape, ecological, heritage and cultural values, and in recognition of its importance for recreation and community stewardship.

The property is owned in fee simple by the Dunedin City Council. Day-to-day management of the property is currently undertaken by the Hereweka/Harbour Cone Management Trust Board Incorporated (the Trust), operating under a Memorandum of Understanding (MOU) with the Dunedin City Council signed on 28 July 2015. This MOU records Council's appointment of the Trust as its special agent to manage the property, in accordance with this management plan and the terms contained in the MOU. This Management Plan provides the overarching policy and management framework within which both the Council and the Trust carry out their respective roles and responsibilities.

### 5.1 Legal Protection and Reserve Status

Council will initiate a process to consider whether all or part of the Hereweka Harbour Cone property should be gazetted as reserve under the Reserves Act 1977. That process will assess the benefits, implications and available classification options before any formal decision is made.

Recreation reserve classification is one option that may be considered because of the broad range of recreational, landscape, cultural, heritage, ecological, biodiversity restoration, working landscape and community values associated with the property.

Section 17 of the Act relates to recreation reserves. Although recreation reserves are held principally for recreation and sporting activities and the welfare and enjoyment of the public, section 17(2)(b) also provides for the conservation of scenic, historic, archaeological, biological, geological and other scientific features, and indigenous flora, fauna and wildlife. These provisions indicate that recreation reserve classification may provide an appropriate framework for both public recreation and the protection of the property's wider values. Its suitability, including whether other classifications or a combination of classifications would be more appropriate, will be considered as part of the gazettal process.

Any reserve classification would determine the statutory purposes for which the land is held and influence the activities that may be authorised. It would also establish a statutory framework for future decision-making and long-term stewardship.

This Management Plan has been prepared in a manner broadly consistent with the purpose, principles and management-planning requirements of the Act. This will enable it to inform the gazettal and classification process and provide a foundation for any future reserve management plan. If the land is gazetted, Council will consider whether this Plan can be adopted, amended or otherwise used to satisfy the applicable requirements of the Act, including any required public consultation.

If the property, or any part of it, is gazetted as reserve, Dunedin City Council would remain the administering body unless another arrangement were made in accordance with the Act. As administering body, Council would retain statutory responsibility for approvals, authorisations and other decisions required under the Act. Council could delegate or authorise particular management

functions where permitted and appropriate, while retaining responsibility for functions that cannot lawfully be delegated.

Where land remains outside reserve status, or where tenure arrangements change, Council will consider whether additional legal mechanisms, such as covenants or easements, are necessary to protect the property's values and maintain public access.

## **5.2 Disposal and Boundary Adjustments**

Any proposed disposal or boundary adjustment may be considered only where it is consistent with:

1. The requirements of the Reserves Act 1977, if applicable;
2. The objectives and policies of this Management Plan;
3. The legal status of the land; and
4. The protection of the property's identified values.

Any proposal to dispose of land must be assessed against this Management Plan prior to initiating any disposal process. Public consultation will form a necessary part of any disposal or boundary adjustment process, in accordance with statutory requirements and Council policy.

## **5.3 Governance and Management Arrangements**

The Hereweka/Harbour Cone Management Trust Board Incorporated (the Trust) provides day-to-day management of the property, including coordination of volunteers, implementation of restoration projects, community engagement, monitoring, and operational activities, in accordance with this Management Plan, Trust Deed, and the MOU with the Dunedin City Council (including any variation or replacement MOU).

The Trust operates as a management body, working collaboratively with the Council to:

1. Implement this Management Plan;
2. Advocate for and promote the values of the property;
3. Coordinate management activities; and
4. Seek and support funding and partnership opportunities.

The MOU between the Trust and the Dunedin City Council sets out:

1. Roles and responsibilities;
2. Decision-making processes;
3. Reporting and accountability requirements; and
4. Matters requiring formal Council approval.

While the Trust undertakes day-to-day management, statutory approvals, legal authorisations, and matters requiring Council approval remain with the Dunedin City Council, unless expressly delegated or authorised in accordance with the MOU and relevant legislation.

## 5.4 Resourcing and Funding

Implementation of this Management Plan may be supported through a combination of:

1. Council resources, including staff expertise, statutory and administrative processes, asset management and approved funding; and
2. External funding obtained by the Trust.

The Trust may seek contestable funding, grants, sponsorship and partnerships for projects and activities relating to the property, including biodiversity restoration, heritage conservation, research and community initiatives. Any such project or activity must be consistent with the purposes of the Trust, this Management Plan, the purpose of the land and, where applicable, its classification under the Act. It must also comply with applicable legislation, funding conditions and all required Council, landowner and statutory approvals.

Council funding will be considered through its Long-Term Plan, Annual Plan and other applicable funding processes. Funding priorities may include access, public safety, asset management, maintenance, protection and other activities necessary to give effect to the purposes and policies of this Management Plan.

If the property, or any part of it, becomes subject to the Act, activities and expenditure affecting that land must be consistent with the Act, its reserve classification and Council's responsibilities as administering body. Money received or held by Council in its capacity as administering body must be managed and applied in accordance with the financial provisions of the Act.

Any sponsorship or funding arrangement that would confer naming, advertising, occupation, commercial-use or other rights over the land must be separately authorised in accordance with any legislation and Council policy.

## 5.5 Plan Governance and Implementation

Regardless of the management structure, management of the Hereweka Harbour Cone property will be undertaken in accordance with this Management Plan.

This section focuses on governance and implementation arrangements. Other administrative matters (including commercial use and permitting processes) are addressed in relevant sections of the Plan.

Throughout this Management Plan, the term "appropriate approvals" refers to the consents, authorisations or endorsements required for a particular activity. Depending on the nature of the activity, these may include approvals from:

- The Dunedin City Council (as landowner and administering body);
- The Trust (under the MOU);
- Any leaseholders;
- Statutory agencies;
- Mana whenua partners, as represented by Te Rūnanga o Ōtākou;
- Other relevant parties.

Clear protocols for processing management decisions and obtaining appropriate approvals will be maintained and updated as required.

### **Aims**

1. The Hereweka Harbour Cone property is administered in accordance with this Management Plan.
2. The Hereweka Harbour Cone property is legally protected using mechanisms that protect its values in perpetuity.

### **Objectives**

1. To ensure efficient, effective, and lawful delivery of the aims, objectives and policies of this Plan, consistent with the property's values.
2. To maintain a governance and management structure that protects the property's values in perpetuity.
3. To secure long-term legal protection of the property to ensure appropriate public use and value protection in perpetuity.
4. To ensure the Management Plan remains current and responsive to changing circumstances and increased knowledge.

### **Policies**

1. Initiate the process of considering whether all or part of the property should be gazetted as reserve under the Reserves Act 1977, to support the long-term recognition, protection and management of its landscape, cultural, historic, ecological and recreational values.
2. All statutory authorities and legal approvals will be issued by the Dunedin City Council, unless otherwise formally delegated or agreed.
3. Any consideration of disposal or boundary adjustment must be assessed in accordance with the objectives of this Management Plan, and any statutory requirements.
4. Consult with Te Rūnanga o Ōtākou on all matters that may affect cultural values, including ecological restoration, species management, and public access.
5. Where applicable, public notification and consultation in accordance with the requirements of the Reserves Act 1977 will be undertaken for boundary adjustments or disposal of property, if this became necessary.
6. Day-to-day management of the property will be undertaken by the Trust under a Memorandum of Understanding with the Dunedin City Council, unless formally replaced with an alternative governance option.
7. Clear protocols between the Trust and the Dunedin City Council will guide decision-making and approvals.
8. The Trust will meet regularly to oversee management and implementation of this Plan.

9. The Trust will actively seek funding and partnerships to support implementation of this Plan.
10. This Management Plan will be kept under continuous review, in accordance with legislation.

## 6.0 Landscape and Land Use

### 6.1 Visual Landscape and Land Use

The Hereweka Harbour Cone property makes a substantial contribution to the distinctive landscape character of the Otago Peninsula. The landscape clearly expresses its formative processes through a combination of natural landforms and cultural features. Extensive pasture cover across much of the property, together with the relative absence of fragmented or disjointed vegetation patterns, allows the underlying volcanic landform to remain highly legible. Rocky outcrops and remnant stumps from earlier forest cover are readily visible and illustrate the site's volcanic origins and subsequent erosion processes. Remaining bush areas further enhance the perceived naturalness and visual quality of the landscape.

The visual values of the property are significant both within the site itself and across the wider peninsula. Due to its elevated position, much of the property forms an important backdrop to surrounding settlements and landscapes. Its predominantly natural and rural character contributes strongly to the overall sense of place and landscape quality of the Otago Peninsula. The distinctive conical form of Hereweka Harbour Cone is an iconic landmark of high significance to the Dunedin community.

The Hereweka Harbour Cone property retains exceptionally low levels of artificial light intrusion and offers high-quality night sky visibility. The absence of urban lighting, combined with elevated ridgelines and expansive horizons, contributes to a strong sense of natural darkness and reinforces the property's rural character and experiential values. In addition to supporting nocturnal species and natural behavioural cycles, the preservation of dark sky conditions enables low-impact night-time recreation, including stargazing and astrophotography, within a high-quality landscape setting.

The property's land-use history, particularly its past small-scale dairy farming, remains highly legible. This is largely attributable to the continued dominance of pasture cover, which enables historic features such as shelter plantings, stone walls, and building remnants to remain visible in the landscape. Notably, the property is largely free of modern development, reinforcing its visual coherence and heritage values.

Hereweka Harbour Cone and the wider Otago Peninsula are of high significance to mana whenua and form part of what has been described as a "pristine archaeological landscape of historic occupation" associated with early European settlement in Dunedin (Middleton, 2008). Furthermore, Hereweka Harbour Cone is recognised as a Wāhi Tupuna under the 2GP. As such, the property and its surrounds are recognised as an important cultural landscape with layered cultural and historic associations.

Given these values, minimising the visual and landscape impacts of structures, plantings, earthworks, and other forms of development is critical. Enhancement projects must be carefully considered to ensure they do not inadvertently compromise key landscape values, landform legibility, or the pastoral character that underpins the property's significance.

Several areas within the Hereweka Harbour Cone property require more detailed spatial planning to ensure that activities and enhancements are undertaken in a coordinated and sensitive manner, and within the context of the property's overall values. This is particularly important in locations where public use may be concentrated or where multiple values and uses intersect. Priority areas include the Bacon Street Management Zone, the main entrance within the Stewarts Creek Management Zone, the historic site of Larnach's model dairy farm within the Smiths Creek Management Zone and

the existing woolshed site in the Smiths Creek Management Zone, which has potential for development as a Visitor Hub.

The Bacon Street Management Zone, for example, has multiple overlapping values, including ecological restoration potential, provision of open space for local residents, opportunities for community initiatives such as orchards, and its role within wider recreational networks. Rather than considering these values and initiatives in isolation, it is essential that they are planned collectively—both at the Management Zone scale and in relation to the wider property. This integrated approach enables potential interactions and cumulative effects to be identified and managed in a way that supports the overall aims of this Management Plan.

### **Aim**

1. The Hereweka Harbour Cone visual amenity, natural character, and heritage landscape values are protected and enhanced in accordance with the long-term vision of this Management Plan.

### **Objectives**

1. To protect and enhance the visual amenity values of the property, with particular emphasis on maintaining the visual coherence and legibility of the natural landform.
2. To protect and enhance the natural landscape character values of the property.
3. To protect and enhance the heritage and cultural landscape character values of the property.
4. Acknowledge and promote the nocturnal visual environment/dark sky as an integral part of the landscape and as an asset for current and future generations.
5. Identify provisions to safeguard, protect and enhance the dark sky above Hereweka and Otago Peninsula.
6. To minimise potential conflict between the property's values and the uses of the property.
7. To enhance land use and landscape values through coordinated consideration of developments, activities, and initiatives at specific sites across the property.

### **Policies**

1. Avoid significant earthworks that detract from the natural landform and landscape character; where earthworks are necessary, ensure they are designed to integrate with and respond to natural landforms.
2. Protect existing areas of indigenous vegetation and enhance their extent and natural character.
3. Provide for new planting and revegetation in a manner that integrates with or highlights natural landforms and is responsive to site-specific conditions and natural processes.

4. Locate and design buildings, structures, fencing and other built elements to minimise their visual impact on the natural and rural character of the property.
5. Protect natural night sky values by avoiding unnecessary artificial lighting and ensuring that any new lighting is low-intensity, shielded, and designed to prevent upward or horizontal light spill.
6. Ensure that all enhancement activities and developments are compatible with sustaining the cultural and heritage landscape values of the property, including minimising adverse effects from modern structures and maintaining an appropriate pastoral character.
7. Protect and appropriately manage structures, plantings, and features that contribute to the heritage landscape character of the property.
8. Ensure that all property enhancements are sensitive to the full range of the property's values and are consistent with this Management Plan and any relevant secondary plans.
9. Require detailed and integrated planning for specific sites where public use may be concentrated or where activities may conflict with landscape, cultural, or heritage values.

## **6.2 Land Use and Catchment Functions**

A key value of the Hereweka Harbour Cone property lies in its potential to implement and demonstrate a multifunctional land-use model. Multifunctional land use seeks to deliver a broad range of environmental, cultural, social, and economic benefits from the same landscape. For Hereweka Harbour Cone, these benefits include food production, protection and enhancement of landscape character, improved water quality, flood attenuation and water management, wildlife habitat, protection of cultural features, and strengthened relationships with local communities.

Central to this approach is the development of a resilient landscape capable of regeneration and adaptation over time. The historic replacement of complex indigenous ecosystems with simplified pastoral farming systems has reduced the landscape's capacity to self-regenerate and diminished its ability to provide the full suite of ecosystem services that were once naturally present, including healthy stream ecology and stable soil systems.

Effective catchment management requires an integrated approach to soil and water management. This includes maintaining soil structure to support rainfall infiltration, establishing vegetation to slow surface water movement on slopes, maintaining year-round vegetative ground cover, and protecting and restoring natural vegetation in riparian margins, wetlands, and other strategically important areas of the catchment. A well-managed rural landscape of this nature can play a critical role in moderating the impacts of extreme weather events, including flooding.

Waterways are a fundamental component of the Hereweka Harbour Cone and wider Otago Peninsula landscape. They function as vital ecological connectors, linking hill systems to the coast and supporting both terrestrial and aquatic ecosystems. Permanent and seasonal wetlands and waterways provide an essential framework for sustainable land management on the property. Prioritising these areas as ecological corridors supports the re-establishment of indigenous flora and fauna, enhances natural processes and connectivity, and provides a strong natural structure within which pastoral land use can continue in a more sustainable form. Restored waterways also help reinforce the long-term ecological integrity of the property.

Historic clearance of tall woody vegetation on steep slopes to create pasture has increased the rate and visibility of soil erosion across the property. While land sliding and erosion are natural processes

that have shaped the landscape over thousands of years, deforestation has accelerated these processes. Shallow soil erosion associated with pastoral land use is particularly evident and results in the loss of fertile topsoil, increased sedimentation of waterways, and downstream impacts on communities and natural environments.

Climate change is expected to increase the frequency and intensity of extreme weather events such as windstorms, rainfall and flooding (NIWA, 2024), further elevating erosion risk across the property. Approximately 50 percent of the Hereweka Harbour Cone property consists of erodible hill country, which is likely to become increasingly vulnerable under future climate conditions.

The establishment of trees and scrub on the most erosion-prone landforms is therefore a priority. Steep gullies, unstable slopes, and exposed faces vulnerable to erosion will be progressively planted with appropriate indigenous and, where necessary, exotic species. This will be undertaken in conjunction with adaptive grazing management, including reduced stocking rates or the exclusion of livestock in high-risk areas. In areas subject to significant erosion risk, the rapid establishment of woody vegetation with deep root systems is essential to reduce the likelihood and severity of further erosion. While the re-establishment of woody vegetation can substantially slow erosion processes, it is acknowledged that land sliding and erosion cannot be entirely prevented.

### **Aim**

1. To enhance critical catchment functions and ecosystem services, including flood attenuation, climate regulation, soil stability, and water purification.

### **Objectives**

1. To protect and enhance the values of the property by minimising the risk of flooding, land instability, and soil erosion.
2. To reduce sedimentation within waterways on the property and adjoining downstream catchments.
3. To protect and improve the natural character, ecological health, and function of waterways, streams, and wetlands.

### **Policies**

1. Develop and implement a revegetation programme to establish appropriate tree and shrub species on erosion-prone slopes and gully systems, including areas with a high risk of sheet or gully erosion.
2. Promote slope stability improvements through collaboration with relevant agencies, research institutions, and tertiary education providers to integrate best-practice geotechnical, ecological, and land management expertise.
3. Develop and progressively implement measures to protect and restore waterways, streams, and wetlands, including fencing, riparian planting, and buffer establishment, in conjunction with Section 7 of this Management Plan.

4. Where practicable, progressively remove or modify engineered stormwater systems and reinstate natural waterway functions, provided this does not place existing infrastructure at risk.
5. Avoid the construction of permanent facilities and structures in areas prone to flooding, land instability, or erosion risk.

### **6.3 Sustainable Farm Management**

Grazed pasture is the dominant vegetation cover across the Hereweka Harbour Cone property, reflecting its history of dairy farming and, more recently, sheep farming. Ongoing farming operations play a key role in maintaining the property's rural character and expansive open landscapes. Sheep farming, in particular, provides a cost-effective and low intensity means of retaining these open space values while remaining broadly compatible with the property's wider natural, cultural, and recreational values.

Rather than prioritising maximum production or revenue, farm management will emphasise a multifunctional land-use approach. This includes the maintenance of landscape character, facilitation of safe public recreation, and the progressive protection and restoration of riparian margins, wetlands, steep gully systems, natural ecosystems, and cultural heritage sites. These outcomes will be supported through appropriate fencing, stock management, and the exclusion of grazing from areas of high ecological, cultural, or heritage value.

The working farm also provides an important opportunity for urban communities—particularly children—to experience an operational rural environment. To protect heritage values, minimise soil compaction and erosion, and ensure public safety around livestock, sheep farming is considered the only appropriate form of grazing on the property.

At the time of adoption of this Management Plan, the property is licensed for grazing purposes. Grazing contributes to the management of vegetation, helps maintain the property's working-landscape character, and may support other management objectives, including access, biodiversity restoration and fire-risk reduction, where appropriately managed. The licence recognises the presence of public walking tracks and provides for public access, with seasonal restrictions during lambing where necessary. The Trust and Council will continue to engage with the licensee regarding farm management during the license term and to ensure that grazing activities remain aligned with the objectives and policies of this Management Plan and, where applicable, the requirements of the Act. Given the multiple and overlapping values of the property, it is essential that the farm licensee has a clear understanding of these values and of the potential for farming practices to positively or negatively affect them. The careful provision and placement of infrastructure—such as gates, stiles, and fencing—will support compatibility between farming operations, public access, biodiversity enhancement, and heritage protection. Ongoing communication and collaboration between the Trust and the licensee will be critical to the success of this integrated management approach.

Many existing farm-related structures on the property remain essential to ongoing operations and should be retained where practicable. The woolshed and yards at 1299 Highcliff Road function as the operational hub of the farming enterprise. Over time, some farming structures may become redundant as management needs evolve. Before any decision is made to remove or dispose of buildings or infrastructure, their potential future value to the property must be carefully assessed.

High standards of animal welfare are a fundamental component of sustainable farm management and are both a legal and ethical obligation. Livestock must be provided with adequate shelter from

adverse weather conditions and extremes of temperature. This may be achieved through the retention and enhancement of existing shelterbelts, the protection of historic plantings, and the establishment of new vegetation where appropriate, including for erosion control and biodiversity outcomes.

Climate change considerations are increasingly relevant to agricultural land management. As national climate policy continues to evolve, the agricultural sector will be required to better account for and manage greenhouse gas emissions. To demonstrate leadership in sustainable land use, the farm licensee will be required to monitor emissions associated with farming activities, seek opportunities to reduce emissions over time, and comply with relevant legislative requirements. These emissions should be considered alongside carbon sequestration benefits arising from revegetation and biodiversity restoration across the property.

### **Aims**

1. To ensure that farm operations contribute positively to, and enhance, the multiple values of the Hereweka Harbour Cone property.
2. To implement farming practices that align with best-practice sustainable land management principles, high standards of animal welfare, and environmental stewardship.
3. To support farming systems that build social capital and encourage community connection with food production and land management.

### **Objectives**

1. To operate a farming system that actively supports the enhancement of the property's natural, cultural, heritage, and recreational values through a multifunctional management approach.
2. To apply sustainable farming practices that reflect and reinforce the multifunctional management objectives of the property.
3. To maintain farming operations that meet or exceed best-practice standards in animal husbandry, animal welfare, and environmental care.
4. To recognise, monitor, and progressively reduce carbon emissions associated with farming activities on the property.
5. To encourage farming systems that enable community participation and deliver wider social benefits.

### **Policies**

1. Retain pastoral farming across the property, except in areas subject to heritage conservation requirements, sites of significance to mana whenua, approved revegetation or environmental programmes, or agreed community initiatives.

2. Regularly review the spatial extent of farming across the property, with stock being permanently excluded from areas where approved ecological, heritage, or community initiatives are established.
3. Continue to work collaboratively with the farm licensee to ensure that farm management planning:
  - a. Demonstrates sustainable farming practices that support the protection and enhancement of the property's landscape, ecological, cultural, heritage, and recreational values;
  - b. Reflects best practice in animal welfare and husbandry;
  - c. Recognises the public good role of the property and the primary non-farming uses of parts of the land;
  - d. Maintains appropriate stocking rates and grazing management to minimise soil compaction, erosion, and sediment runoff, and to protect recreational and cultural heritage values;
  - e. Avoids or mitigates adverse impacts on areas of recognised ecological, cultural, or heritage value, including fenced conservation areas, waterways, wetlands, and planted tree crops;
  - f. Supports a collaborative approach to understanding, monitoring, and where practicable reducing greenhouse gas emissions associated with farming activities on the property, including the provision of relevant emissions data to Council where reasonably required for organisational reporting or statutory purposes;
  - g. Encourages the identification and implementation of practical measures, developed in consultation with the lessee, to improve environmental and emissions outcomes over time.
4. The Trust will consult with the licensee where revegetation, infrastructure, or development proposals may affect farming operations.
5. DCC will liaise with the licensee regarding public access arrangements during lambing periods to balance animal welfare and public safety.
6. On expiry or review of any grazing lease, assess the most appropriate mechanisms for retaining farming operations that complement and enhance the objectives of this Management Plan.
7. Provide and maintain infrastructure that supports compatibility between farming operations and the property's other values, in accordance with policies elsewhere in this Management Plan.
8. Retain and maintain property infrastructure where practicable and desirable. Removal or disposal of infrastructure will only be considered where it:
  - a. Adversely affects natural or heritage values;
  - b. Is not of historic or cultural significance;
  - c. Is not of importance to mana whenua;

- d. Is no longer required for any approved or reasonably foreseeable future use; and
  - e. Is demonstrably uneconomic to retain, upgrade, or operate.
9. Give favourable consideration to farming systems and initiatives that deliver positive outcomes for the local community.

#### **6.4 Local Food Economies**

Pastoral farming has historically been undertaken on the Hereweka Harbour Cone property as a commercial land use. As Council considers whether all or part of the property should be gazetted as reserve, opportunities may also be considered for limited, locally focused food-production initiatives that contribute to land management, stewardship, community involvement and public understanding of the property's working-landscape values.

Any such initiative must remain ancillary to the principal purposes and values of the property and must not compromise public access or its landscape, cultural, historic, ecological or recreational values. If the relevant land becomes subject to the Act, any farming or food-production activity must be consistent with the reserve classification, this Management Plan and all applicable statutory approval, leasing and licensing requirements. There is growing community interest in locally produced food sourced from landscapes with which people have a strong cultural and social connection. As a prominent public property and community asset, Hereweka Harbour Cone has potential to support carefully managed initiatives that reflect this interest, provided they are compatible with the property's primary purposes, do not confer exclusive private benefit, and do not compromise landscape, ecological, cultural, heritage, or recreational values.

Small-scale community or cottage initiatives—whether commercial or non-commercial—may be considered where they are clearly secondary to the primary farming and open space functions of the property. Such initiatives can contribute to public engagement, education, and stewardship. Examples may include beekeeping or a community orchard, where these activities remain low-impact, publicly accessible in nature, and consistent with property values.

Supporting local food initiatives within a public land context is primarily about strengthening community relationships with the land, rather than maximising production or profit. Initiatives should foster understanding of sustainable land use, encourage environmentally responsible consumption, and reinforce the role of the property as a shared public asset held for present and future generations.

#### **Aims**

1. Food production systems that support local consumption are encouraged.
2. Local communities derive social, educational, and cultural benefit from compatible small-scale initiatives on the property.

#### **Objectives**

1. To support small-scale, non-intensive cottage industries and community initiatives where they are compatible with existing property uses and values.
2. To ensure any local food initiatives enhance public benefit, stewardship, and connection to the property, rather than private or exclusive use.

## Policies

1. Proposals for cottage industries may be considered, provided applications demonstrate an understanding of the property's values and the compatibility of the proposed activity with those values, including an assessment of any actual or potential adverse effects and the actions proposed to avoid, remedy, or mitigate those effects.
2. All initiatives require the appropriate approvals of the administering body and, where applicable, must be authorised through a lease, licence, or concession in accordance with the Act.
3. Support local food initiatives on the property only where they demonstrably enhance public benefit, community stewardship, and connection to the property, and do not result in private appropriation or exclusive use.
4. Support research into the property's potential to accommodate local food production systems that directly supply local consumers.
5. The sections *Commercial Use* and *Occupation Agreements (leases, licenses and easements)*, and other relevant provisions of the Dunedin City Council Reserves Management Plan – General Policies, must be read in conjunction with this section.

## 6.5 Forest Woodlot Management

The Hereweka Harbour Cone property currently contains very limited planted woodlots. The establishment and management of forest woodlots must primarily serve public purposes, including environmental protection, biodiversity enhancement, land stability, landscape integration, and education, consistent with the purpose of the property and the Act, where applicable.

New forest woodlots—whether indigenous or exotic—may be considered where they provide clear ecosystem services and are compatible with landscape, ecological, cultural, and heritage values. Woodlots will not be established primarily for commercial forestry purposes.

The Council's Zero Carbon Plan identifies the growth of carbon sequestration that aligns with mana whenua and community values as one means of supporting climate objectives. On this property, any sequestration initiative should therefore focus on indigenous revegetation and restoration that also strengthens biodiversity, improves landscape quality, supports erosion control, enhances recreation, and contributes to long-term ecological resilience. Carbon storage is recognised as one outcome of successful restoration rather than the sole purpose of land use change.

Carbon accounting, registration, verification, or crediting frameworks may provide useful tools to measure, recognise, and attribute carbon sequestration outcomes from eligible restoration or forest areas. These frameworks may assist in demonstrating climate benefits, attracting external funding or investment, supporting long-term restoration maintenance, and enabling organisations to contribute to verified carbon removal outcomes. Use of any such framework should be assessed on its merits to ensure it supports biodiversity, landscape, cultural, recreational, and intergenerational values associated with this whenua, and is consistent with the objectives of this Management Plan.

Woodlot design and layout must prioritise protection and restoration of waterways, erosion-prone slopes, and landscape coherence. Species selection will favour trees suited to local conditions and capable of delivering multiple benefits, including habitat provision, erosion control, and, where appropriate, small-scale local use of timber or firewood. In steep or inaccessible areas, preference will be given to species and management approaches that minimise the need for heavy machinery and reduce environmental disturbance.

Forest management will follow best-practice principles, with continuous cover forestry preferred to maintain canopy cover, support natural regeneration, and minimise visual and ecological impacts. Clearfelling will not be supported except where required for safety, biosecurity, or ecological restoration purposes.

As a publicly owned property, Hereweka Harbour Cone offers opportunities for long-term research into indigenous forestry, ecological restoration, and alternative forest management models that can inform best practice elsewhere.

Erosion-control plantings (including poplar, willow, and eucalyptus) may also contribute to biodiversity outcomes where livestock exclusion and appropriate management allow indigenous understory regeneration to occur.

Tree removal will be undertaken where necessary to manage public safety risks or to progressively remove wilding or inappropriate species. Tree management at heritage or archaeological sites requires appropriate statutory approvals.

Given the open character and high landscape values of the property, any proposal for new woodlots will be subject to rigorous assessment, including consideration of landscape and visual effects.

## **Aim**

1. To establish and manage forest woodlots that deliver environmental and educational benefits while remaining consistent with the purposes of a reserve under the Reserves Act 1977.

## **Objectives**

1. To plan and manage woodlots primarily for biodiversity enhancement, land stability, waterway protection, research, education, and limited local resource use where consistent with property values.
2. To ensure woodlot design and management enhances ecological connectivity and indigenous biodiversity across the property.
3. To ensure carbon sequestration initiatives deliver positive outcomes for biodiversity, landscape, cultural, recreational, and other property values, while supporting the wider objectives of this Management Plan.

## **Policies**

1. Establish woodlots only where they provide demonstrable environmental and public benefit and are consistent with the property's values.
2. Locate native and/or exotic woodlots to enhance ecological connectivity and landscape coherence.
3. Promote age and species diversity within woodlots to improve ecological resilience and long-term stability.
4. Apply continuous cover forest management to maintain canopy cover and minimise environmental and visual impacts.
5. Retain existing woodlots and shelterbelts where they contribute to land stability, amenity, heritage, or ecological values.

6. Manage exotic woodlots to encourage indigenous understory regeneration where appropriate.
7. Analyse the costs, benefits, risks, and long-term implications of any carbon sequestration registration, accounting, crediting, or funding arrangement associated with eligible forest or restoration areas, ensuring that any participation is consistent with the property's values and contributes to long-term restoration, biodiversity, landscape, and public management outcomes.
8. Ensure removal of tree species identified as weeds seeks full utilisation of material where appropriate and obtains necessary approvals, particularly near heritage sites.
9. Require landscape and visual impact assessments for all proposed new woodlots to ensure appropriate integration within the property.

## 7.0 Ecology

### 7.1 Ecology Management Zones and Priorities

The Hereweka Harbour Cone property is a large and complex landscape. The protection and enhancement of its ecological values require sustained investment over long timeframes, and it is unlikely that all desirable management actions can be undertaken simultaneously. A clear distinction between *necessary* and *desirable* actions provides a practical framework for prioritising ecological management in a manner consistent with available resources and property values.

Immediate priorities focus on the protection of existing indigenous vegetation and the control of high-threat ecological weeds. This approach recognises that existing indigenous forest remnants are continuing to decline through attrition, and that early intervention in weed control is generally more effective and cost-efficient than attempting control once weeds become widespread.

Indigenous restoration should initially prioritise infilling and buffering of existing forest remnants, followed by restoration of indigenous vegetation on new sites. Once indigenous habitats have been stabilised and enhanced, consideration may be given to appropriate species reintroductions.

The division of the property into management zones supports effective operational planning by enabling ecological objectives to be addressed at a manageable scale. The basis for the five management zones is described in **Section 1.4**. Short-term actions and priorities are set out in the Hereweka Harbour Cone Property Implementation Plan, which sits as a secondary document to this Management Plan.

#### Aim

1. Ecological values are managed in a coordinated, systematic, and prioritised manner across the property.

#### Objectives

1. To manage ecological values within clearly defined management zones.
2. To regularly review and update ecological priorities in response to monitoring, research, and resource availability.
3. To prioritise restoration actions that respond to landform, hydrology, slope stability, and visual landscape coherence.
4. To progressively implement restoration at a catchment scale, with particular emphasis on upper catchments and headwaters.
5. To ensure restoration priorities are aligned with available funding mechanisms and long-term maintenance capacity.

#### Policies

(in order of priority)

1. Protect and enhance small indigenous forest remnants and control sycamore and Chilean flame creeper, banana passionfruit and Bomarea within the Smiths Creek Management Zone.

2. Control Chilean flame creeper within the Stewarts Creek and Peggys Hill Management Zones.
3. Protect and enhance dry forest remnants within the Harbour Cone and Stewarts Creek Management Zones.
4. Prioritise damp gully systems and ephemeral drainage lines for stock exclusion and planting, recognising their high ecological value and role in slope stability.
5. Promote indigenous forest regeneration within areas of sprayed gorse in the Peggys Hill Management Zone, including seeding with fast-growing fleshy-fruited species such as poroporo (*Solanum laciniatum*).
6. Facilitate natural indigenous forest regeneration within the Harbour Cone and Bacon Street Management Zones, including gorse control, but excluding aerial herbicide spraying.
7. Restore podocarp-dominant forest and indigenous riparian vegetation on low-elevation alluvial landforms within the Bacon Street and Stewarts Creek Management Zones.
8. Plan and implement restoration planting at a catchment scale, including restoration to the upper extents of the Smiths Creek catchment, to improve hydrological function and ecological connectivity.
9. Align restoration initiatives with available funding mechanisms and confirmed long-term maintenance capacity, ensuring projects are realistically resourced, deliver measurable outcomes, and do not create unfunded future liabilities for the property.

## 7.2 Existing Indigenous Vegetation and Habitats

Only a small proportion of the Otago Peninsula retains indigenous forest or shrubland cover. While the Hereweka Harbour Cone property retains a higher proportion than much of the surrounding landscape, indigenous woody vegetation remains fragmented and largely confined to steep, rocky, or otherwise marginal landforms.

Most existing indigenous forest and shrubland on the property has been heavily modified by historic grazing, resulting in suppressed regeneration, depleted understorey, and reduced ground cover. These conditions increase vulnerability to wind damage and edge effects, leading to progressive canopy dieback and long-term conversion to grassland if not addressed.

Some moist forest areas on Peggys Hill and in the upper Stewarts Creek catchment have been fenced to exclude stock, retaining intact canopies and showing rapid understory regeneration after 10 years<sup>2</sup>. In contrast, the dry forest remnants of Rutherford's Bush, fenced in 2022, shows recovery of ferns, shrubs and tree saplings. Other dry forest remnants remain unfenced and are typically more fragmented, with internal canopy gaps.

Mature indigenous forest provides disproportionately high ecological value and is significantly easier to retain than to recreate. Accordingly, protection and enhancement of existing indigenous vegetation is a primary ecological priority for the property.

Management of forest remnants should be closely integrated with restoration initiatives, including buffering and infill planting, to reduce edge effects such as wind exposure, weed invasion, and stock browse.

Further detail on existing vegetation patterns is provided in **Appendix 3**.

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<sup>2</sup> Nature Positive Ltd. 2021

## Aim

1. Existing indigenous vegetation and habitats are protected and enhanced to improve ecological function and long-term viability.

## Objective

1. To maintain and improve the condition of existing indigenous vegetation to support high-quality habitat for indigenous flora and fauna.
2. To improve the resilience of existing indigenous vegetation through appropriate replacement planting and buffering.

## Policies

1. Protect existing indigenous vegetation from adverse effects arising from farming, public use, and other activities.
2. Develop indigenous vegetation and habitat management approaches within each management zone.
3. Monitor the ecological condition of existing indigenous vegetation and habitats at intervals of five to ten years.
4. Ensure enhancement activities are consistent with the property's cultural, landscape, or heritage values.
5. Ensure enhancement activities do not adversely affect indigenous fauna.
6. Enable the trialling of low-cost, low-intervention ecological restoration techniques that support natural regeneration of indigenous vegetation, provided such approaches are consistent with property values and are monitored to assess effectiveness.

## 7.3 Habitat Restoration

The existing pattern of indigenous forest on the Hereweka Harbour Cone property provides insight into historic vegetation patterns, which were strongly influenced by elevation, landform, aspect, and microclimate. On Peggys Hill (401m above sea level, the second highest hill on the Otago Peninsula) and in the upper Stewarts Creek catchment, the influence of fog and drizzle from prevailing north-east and south-east weather systems creates relatively moist conditions. Forest in these areas supports plant species not present in drier environments, including crown fern (*Blechnum discolor*), *Blechnum colensoi*, soft tree fern (*Cyathea smithii*), *Rumohra adiantiformis*, filmy ferns (*Hymenophyllum* spp.), and *Trichomanes venosum*. Peggys Hill and upper Stewarts Creek are among the most significant sites for damp-habitat ferns on the Otago Peninsula. The emergent podocarp miro (*Prumnopitys ferruginea*), which favours moist forest, is present in these areas and is otherwise absent from the Peninsula. The moist forest canopy is characterised by fuchsia (*Fuchsia excorticata*) and māhoe (*Melicytus ramiflorus*), with *Coprosma rotundifolia* and soft tree fern prominent in the understorey.

Elsewhere, on steep mid-slopes and rocky areas, dry forest communities typical of the Peninsula are present. These are characterised by narrow-leaved lacebark (*Hoheria angustifolia*) and/or kōwhai

(*Sophora microphylla*) in the canopy, with *Coprosma crassifolia* in the understorey and dry forest ferns such as *Asplenium hookerianum* and *A. flabellifolium*. Low-elevation alluvial forest, once likely widespread across valley floors, is no longer present on the property. Historically, these areas would have supported tall podocarps such as kahikatea (*Dacrycarpus dacrydioides*), mataī (*Prumnopitys taxifolia*), and tōtara (*Podocarpus totara*), together with lowland ribbonwood (*Plagianthus regius*), kōwhai, and narrow-leaved lacebark along stream margins. The lower sections of Smiths Creek and Stewarts Creek (below approximately 60m elevation) provide suitable habitat for this forest type and are a priority for re-establishment.

Active restoration will be required across much of the property to rebuild indigenous forest cover. Riparian zones are a strategic priority due to their ecological importance, water-quality benefits, and alignment with historic alluvial forest landforms. Restoration in these areas will also enhance connections with indigenous forest remnants on and beyond the property. Habitat restoration can improve connectivity between vegetation patches, increase effective habitat size, support larger and more resilient fauna populations, and reduce fragmentation. There are particular opportunities to strengthen connections in the Bacon Street, Harbour Cone, and Stewarts Creek management zones. Additional priorities include addressing internal and external gaps within dry forest patches on steep slopes in Stewarts Creek, and restoring canopy gaps in fenced forest areas following stock exclusion.

Peggys Hill is of particular restoration significance due to its existing moist forest, high fern diversity, presence of miro, and potential role in reducing landslide instability on lower slopes. Treated gorse on steep slopes may function as a temporary nurse environment for regenerating indigenous species. Indigenous regeneration could be facilitated by seeding dead gorse stands with fast-growing, fleshy-fruited species that attract frugivorous birds and promote natural seed dispersal.

Natural regeneration is occurring in limited areas. On the eastern and northern slopes of Harbour Cone, kānuka (*Kunzea* spp.) is expanding into rough grassland, while mingimingi (*Coprosma propinqua*) is establishing on dry forest margins in Stewarts Creek. These browse-resistant indigenous species may assist in improving canopy cover where grazing pressure remains. Facilitating regeneration in pastoral areas will require careful management and gradual reduction of grazing pressure, and in some locations, stock exclusion. Where regeneration occurs near significant archaeological or heritage sites, vegetation management will be guided by whole-property archaeological assessments and relevant conservation management plans. The Hereweka Harbour Cone Property Implementation Plan provides further detail on processes for encouraging natural regeneration, identifying restoration priorities, and selecting appropriate species for different landforms and habitats across the property.

## **Aim**

1. Indigenous vegetation and habitats are progressively restored, increasing the extent and resilience of indigenous cover.

## **Objectives**

1. To progressively restore indigenous vegetation while integrating protection of existing forest remnants.
2. To re-establish lowland podocarp forest on suitable sites.
3. To restore indigenous riparian vegetation and associated in-stream ecological values.
4. To enhance connectivity between indigenous habitats within and beyond the property.
5. To facilitate natural regeneration where practicable.

6. To establish larger, contiguous areas of indigenous vegetation to improve habitat quality, reduce fragmentation, and enhance landscape-scale ecological function.
7. To ensure restoration planting uses a diverse mix of species appropriate to each habitat type, including canopy trees, small trees, and shrub species.

## **Policies**

1. Develop and implement a Habitat Restoration Plan based on management zones.
2. Regularly review restoration priorities based on ecological outcomes and monitoring results.
3. Maintain and protect restoration projects established prior to adoption of this Management Plan.
4. Protect restoration areas from adverse effects of farming, public use, and other adverse activities.
5. Undertake experimental trials to identify effective and cost-efficient restoration techniques.
6. Monitor restoration outcomes and use results to inform future projects.
7. Facilitate natural regeneration where appropriate.
8. Manage grazing pressure, including stock exclusion where necessary, to support regeneration.
9. Advocate for indigenous vegetation protection and restoration on adjacent land.
10. Maintain appropriate pasture curtilage around historic farmsteads, with vegetation management near heritage sites informed by archaeological assessments.
11. Implement restoration planting to create contiguous areas of indigenous vegetation within and between management zones, reducing habitat fragmentation and improving ecological connectivity.
12. Ensure restoration planting extends from lower riparian areas to upper catchment slopes where practicable, to restore full catchment function.
13. Use restoration planting as a tool for slope stabilisation and slip prevention where this aligns with ecological and landscape objectives.
14. Require restoration planting mixes to include an appropriate balance of canopy trees, sub-canopy species, and shrub species, recognising the ecological importance of shrub-dominated communities for local biodiversity.
15. Establish and support a voluntary tree donation scheme, enabling community members and organisations to contribute financially to restoration projects on the property.
16. Ensure all restoration projects include provision for post-planting maintenance, including weed control, plant replacement, and protection from grazing, for a sufficient period to ensure successful establishment.

## 7.4 Management of Rare and Threatened Species

The Hereweka Harbour Cone property currently provides habitat for several locally important species and some nationally important species. These include the locally important trees miro, narrow-leaved lacebark, kōwhai, lowland ribbonwood, Hall's tōtara, *Melicope simplex*, *Streblus heterophyllus*, and the mistletoe *Ileostylis micranthus*, and the nationally At Risk – Declining climber *Brachyglottis sciadophila*. The Hereweka Harbour Cone property is also the location of a historical record of the Threatened – Nationally Vulnerable tree *Olearia fimbriata*, which has not been recently seen at the site, but which could be reintroduced. Another species that could be considered for introduction to the property is *Helichrysum selago* var. *tumidum*, which is currently known from rock outcrops at Cape Saunders and Lovers Leap, but which could potentially grow on marble outcrops at the Hereweka site.

Hereweka means 'catch weka' and refers to the area being a place where weka, as a food source, were found. Buff weka (*Gallirallus australis hectori*) were historically indigenous to the eastern South Island and Southland but became locally extinct from the South Island. Buff weka are a taoka species to Kāi Tahu. Papatipu rūnaka, including Te Rūnanga o Ōtākou, have supported its reintroduction to islands in Lakes Wakatipu and Wānaka, and to the adjacent Stevenson's Peninsula. Te Rūnanga o Ōtākou are strong advocates for the reintroduction of buff weka to the Hereweka Harbour Cone property. A discussion on the factors requiring assessment when considering the reintroduction of locally and nationally important species is attached in **Appendix 6**.

The South Island rifleman (At Risk - Declining) is known to be present in forest adjacent to Hereweka Harbour Cone and are likely to utilise kānuka forest on the property from time to time. As forest cover in this part of the property increases in extent, rifleman are likely to become more common.

Both Smiths Creek and Stewarts Creek are known to support populations of the threatened freshwater invertebrate kōura (*Paranephrops zelandicus*; Chronically Threatened - Gradual Decline) which suggests that current habitat quality in these streams is reasonably good. Stewarts Creek has not been fully surveyed for fish, and this represents an information gap. At least one barrier to fish passage exists in Smiths Creek and other barriers may be present. Improvement of stream habitats through removal of barriers to fish passage and planting of appropriate riparian vegetation may result in other locally or nationally important fish species colonising these streams, including giant kōkopu (*Galaxias argenteus*).

Translocations of threatened species, either to the site or away from it, need to be undertaken according to Department of Conservation processes and in consultation with iwi.

### Aims

1. Populations of locally and nationally important species are stable or improving.
2. New populations of locally and nationally important species are established where feasible.

### Objectives

1. To maintain or improve existing populations of significant species.
2. To support recovery or re-establishment of appropriate species in suitable habitats.
3. To improve habitat quality to enable natural colonisation from adjacent land.
4. To ensure any translocation, reintroduction, or removal of indigenous species is undertaken in accordance with legislative requirements, best practice, and in partnership with mana whenua, as represented by Te Rūnanga o Ōtākou, and relevant agencies.

## Policies

1. Document the status of locally and nationally important species present on the property.
2. Work collaboratively with Te Rūnanga o Ōtākou and iwi in partnership, and expert stakeholders on species management and reintroduction.
3. Survey aquatic habitats in Stewarts Creek, including assessment of fish passage barriers.
4. Reassess species populations at intervals of five to ten years.
5. Facilitate regeneration of kanuka forest in the Harbour Cone Management Zone to improve habitat for South Island rifleman.
6. Any translocation, reintroduction, augmentation, or removal of indigenous species on the property must be planned and undertaken in accordance with relevant legislation, including the Reserves Act 1977, Wildlife Act 1953, Conservation Act 1987, and any applicable regulations.
7. Translocations must follow current Department of Conservation best-practice guidance, including preparation of a translocation proposal, ecological feasibility assessment, and post-release monitoring plan, and must obtain all necessary approvals and permits prior to implementation.
8. Translocation proposals must demonstrate that suitable habitat exists or will be established prior to release, that threats have been adequately managed, and that the action will not adversely affect existing species, ecological communities, or property values.
9. All translocation activities must be undertaken in consultation with mana whenua, recognising taoka species and mātauraka Māori, and must have the support of relevant rūnaka, particularly where species are of cultural significance.
10. Translocations must align with the objectives of this Management Plan and be consistent with the primary purposes of the property, with priority given to species historically present in the area or to species that will materially contribute to the restoration of indigenous ecosystems.
11. Translocations will not proceed where there is significant uncertainty or unacceptable risk to ecological integrity, public safety, or cultural values, or where ongoing management and monitoring cannot be adequately resourced.

## 7.5 Weed and Pest Plant Management

Hereweka Harbour Cone contains extensive areas of indigenous forest, regenerating shrubland, and riparian restoration plantings that are vulnerable to invasion by pest plants and ecological weeds. These pressures reflect historic land use, reduced grazing, ongoing propagule pressure from surrounding land, and the property's diverse landforms and microclimates.

Several ecological weeds are present at Hereweka and include sycamore (*Acer pseudoplatanus*), hawthorn (*Crataegus monogyna*), gorse (*Ulex europaeus*), elder (*Sambucus nigra*), radiata pine (*Pinus radiata*), macrocarpa (*Cupressus macrocarpa*), gooseberry (*Ribes uva-crispa*), Scotch broom (*Cytisus scoparius*), Darwin's barberry (*Berberis darwinii*) and blackberry (*Rubus fruticosus*). Of these species, gorse and hawthorn are widespread and relatively abundant, while elder is widespread at low density. Sycamore is present at only a few sites but is actively spreading. The remaining species are at relatively low abundance in indigenous vegetation. Weeds also include the non-local indigenous species rangiora (*Brachyglottis repanda*), which is present in the upper part of Stewarts Creek. Climbing weeds such as Chilean flame creeper (*Tropaeolum speciosum*) are also present.

Other climbing weeds such as old man's beard (*Clematis vitalba*), banana passion fruit (*Passiflora tripartita*), and bomarea (*Bomarea caldasii*) appear to be absent or at very low abundance at Hereweka. However, banana passionfruit has become well-established in the Bacon Street management zone. These and other ecological weeds with the potential to invade the site should be subject to surveillance, so that any new weed incursions can be swiftly detected.

If unmanaged, weed and pest plant species pose significant risks to indigenous biodiversity, ecological processes, restoration outcomes, public access, and fire safety.

Weed and pest plant management on the property shall align with the Otago Regional Council Regional Pest Management Plan (RPMP), including the Otago Peninsula site-led pest plant programme. Management will emphasise early detection, rapid response, progressive containment, and eradication where practicable, recognising that long-term surveillance is essential due to ongoing reinfestation risk from adjacent land.

### Aims

1. Ecological weeds and pest plants are controlled to levels that do not threaten indigenous biodiversity, ecological processes, public access, or public safety.
2. The establishment and spread of new pest plant species is prevented through early detection and response.
3. Long-term ecological restoration, access protection, and fire-risk reduction is supported through integrated and prioritised weed management.

### Objectives

1. To protect and enhance indigenous species, habitats, and ecological processes through appropriate and timely weed and pest plant management.
2. To give effect to the Otago Regional Council RPMP, including eradication or progressive containment of designated pest plant species.
3. To reduce long-term management costs and ecological impacts through regular surveillance, monitoring, and early intervention.

### Policies

1. Weed and pest plant management on the Hereweka Harbour Cone property shall align with the Otago Regional Council Regional Pest Management Plan and give priority to ORC-designated Site-Led Pest Plants.
2. The following ORC Site-Led Pest Plants shall be targeted for **eradication where present**, and for ongoing surveillance to prevent re-establishment:
  - Banana passionfruit (*Passiflora tripartita*)
  - Chilean flame creeper (*Tropaeolum speciosum*)
  - Darwin's barberry (*Berberis darwinii*)
  - Chilean rhubarb (*Gunnera tinctoria*)
  - Tradescantia (*Tradescantia fluminensis*)

3. Sycamore (*Acer pseudoplatanus*) shall be subject to **progressive containment and eradication**, recognising its high invasion risk, wind-dispersed seed, and capacity for rapid spread, particularly within the Smiths Creek catchment and on Peggy's Hill.
4. Bomarea (*Bomarea caldasii*) and old man's beard (*Clematis vitalba*) shall be managed in accordance with occupier responsibilities under the RPMP. **Any plants found on the property shall be prioritised for eradication**, recognising ongoing reinfestation risk from bird- and wind-dispersed seed sources on adjacent land.
5. The following species shall be **progressively reduced** due to their capacity to displace indigenous vegetation or inhibit restoration:
  - Hawthorn (*Crataegus monogyna*)
  - Elder (*Sambucus nigra*)
  - Flowering currant
  - Gooseberry
6. The following species shall be **eradicated where detected**, recognising that early intervention is critical to avoid future management escalation:
  - Great bindweed (*Calystegia sylvatica*)
  - Aluminium plant (*Lamium galeobdolon*)
  - Cotoneaster species
  - Himalayan honeysuckle (*Leycesteria formosa*)
  - Barberry (*Berberis glaucocarpa*)
  - Balm of Gilead (*Cedronella canariensis*)
  - Montbretia (*Crocasmia × crocosmiiflora*)
7. Rangiora (*Brachyglottis repanda*) and lacebark (*Hoheria sextylosa*), while indigenous to other regions, shall be eradicated where present, as they do not occur naturally on the Otago Peninsula and may displace locally indigenous vegetation.
8. Gorse (*Ulex europaeus*) and broom (*Cytisus scoparius*) shall be controlled to low levels across the property, with intensified control where:
  - Spread is rapid or unmanaged
  - Access tracks are being encroached upon
  - Fire risk is increasing
  - Indigenous regeneration or restoration is being inhibited

Gorse may be temporarily retained where it is demonstrably facilitating indigenous regeneration, subject to active and documented management.
9. Weed and pest plant management shall be prioritised in areas where unmanaged spread poses a demonstrable risk to indigenous biodiversity, public access, or safety. Where weed control intersects with heritage values, integrated solutions shall be sought; however, ecological risk shall not be deferred indefinitely for heritage considerations.
10. Annual surveillance shall be undertaken across all management zones of the Hereweka Harbour Cone property to detect new weed incursions or expansion of existing infestations, recognising that ongoing reinvasion is inevitable due to adjacent seed sources.

11. Weed and pest plant control activities shall be spatially recorded, including GPS mapping, species treated, methods used, and outcomes achieved, to support adaptive management, accountability, and reporting.
12. Weed management responsibilities of any grazing or land-use licence holders shall be coordinated with wider pest plant management across the property.
13. Weed and pest plant control shall be coordinated with neighbouring landowners, community groups, and relevant agencies where practicable, to reduce cross-boundary reinfestation and improve landscape-scale outcomes.
14. Public education and community engagement initiatives shall be supported to improve awareness of pest plant identification, impacts, and reporting pathways.
15. Sustainable funding sources for weed and pest plant management shall be actively sought, including grants, partnerships, volunteer programmes, and alignment with regional initiatives.

## **7.6 Pest Animal Control**

Pest animals present on the Hereweka Harbour Cone property place ongoing pressure on indigenous vegetation, fauna, and ecological processes. Effective pest animal management is essential to achieving restoration objectives and supporting the potential reintroduction or recovery of locally significant species.

The Otago Peninsula Biodiversity Group (OPBG) has been a cornerstone of community-led predator control on the Otago Peninsula since its formation in 2008 by local residents with a vision of removing introduced mammalian predators to help native wildlife and ecosystems recover. One of their flagship efforts has been the long-term possum eradication programme, which has seen volunteers and staff remove tens of thousands of possums from the peninsula, laying extensive trap networks and engaging landowners and residents in monitoring and reporting.

In recent years, OPBG's possum work has transitioned into a broader collaborative initiative under the Predator Free Dunedin partnership, established in 2018 to connect conservation efforts across the wider Dunedin region with a shared long-term goal of eliminating predators such as possums, rats, and stoats by mid-century. Predator Free Dunedin is responsible for the Otago Peninsula's Possum Free Biosecurity Plan which includes ongoing assurance surveillance across the entire peninsula, while OPBG continues to contribute its local expertise and volunteer base.

Pest animal control at Hereweka Harbour Cone will address a range of introduced mammalian predators and browsers, including rodents, mustelids, hedgehogs, and other species as identified through monitoring. Control programmes will be undertaken using integrated, multi-species approaches to avoid unintended ecological effects and to maximise biodiversity gains. Management will be coordinated with Predator Free Dunedin and other relevant partners to ensure alignment of methods, data sharing, resourcing, and reinvasion prevention, recognising that effective predator suppression requires a sustained, landscape-scale response across the Otago Peninsula.

## Aims

1. Pest animals are controlled to levels that do not threaten indigenous biodiversity or ecological processes.
2. Pest control contributes to landscape-scale biodiversity outcomes across the Otago Peninsula.
3. Pest management supports the potential reintroduction and long-term viability of indigenous fauna.

## Objectives

1. To protect and enhance indigenous species, habitats, and ecological processes through coordinated pest animal management.
2. To integrate pest control on the property with wider predator reduction initiatives.

## Policies

1. Develop and implement a pest animal control programme that specifies priority species, control methods, measurable targets, and monitoring indicators linked to biodiversity outcomes.
2. Pest animal management on the property shall be aligned with the national **Predator Free 2050** vision and **Predator Free Dunedin**, recognising the benefits of shared expertise, operational coordination, and access to funding and resources.
3. Pest control programmes shall consider interactions between pest species and apply integrated control approaches to avoid unintended ecological outcomes such as predator release.
4. Pest animal control shall be used as a foundational tool to support the potential reintroduction of appropriate indigenous species, subject to feasibility assessments and statutory approvals.
5. Monitoring of pest control outcomes will be undertaken to assess effectiveness and inform adaptive management.
6. Where practicable, pest control efforts will be supported and encouraged on adjoining private properties through partnerships, information-sharing, and alignment with wider initiatives, recognising that reinvasion undermines on-site control.
7. Public information will be provided on pest control objectives, methods, and outcomes, including the role of pest control in achieving wider biodiversity and restoration goals.

## 8.0 Heritage and Cultural Landscape

The Hereweka Harbour Cone property forms part of a layered cultural landscape shaped by long-standing Kāi Tahu occupation and later Pākehā settlement. Management of the property must recognise, protect, and actively interpret this cultural landscape as a whole, rather than treating individual sites in isolation. This includes acknowledging both Māori and European histories, their points of intersection, and the enduring relationships between people, land, and resources.

### 8.1 Recognition of Mana Whenua Values

The landscape now known as Ōtepoti Dunedin is part of the wider ancestral landscape under the mana and rakatirataka of Kāi Tahu whānui. The original inhabitants of the area were Kāti Hāwea and Te Rapuwai, who settled Te Wai Pounamu from Polynesia. Over time, further groups migrated and settled here, including the Waitaha people who are known to have arrived on the waka Uruao. A well-known tribal ancestor of Waitaha was Rākaihautū, who carved out the lakes and rivers of Te Wai Pounamu with his kō Tūwhakaroria, a supernatural digging implement.

Further migration and settlement by groups from the North Island occurred in the seventeenth and eighteenth centuries, including Kāti Māmoe from the Hastings area, and Kāi Tahu from the East Cape of the North Island. Through conquest and intermarriage, these different whakapapa lines are referenced by the phrase ‘Kāi Tahu Whānui’ encompassing the broader ancestral connections underpinned by this history of migration and settlement.

Kāi Tahu have a long association with Otago Peninsula and the mauka Hereweka (Harbour Cone). The seasonal practice of **mahika kai**, involving the gathering of food and materials across the rohe, was central to the lives of Kāi Tahu tūpuna. Hereweka formed part of an interconnected network of trails and food-gathering places and was likely used for hunting and resource collection.

The name *Hereweka* means “catch weka” and reflects the historic presence of weka as a valued food source. The mauka also features in Kāi Tahu oral history as a place where Ōtākou tupuna Tarewai sought refuge during conflict with Kāti Māmoe. These narratives reinforce the cultural significance of Hereweka as a place of sustenance, shelter, and identity.

Hereweka Harbour Cone is part of the wider cultural landscape of the Otago Peninsula and must be understood and managed in that context. Recognising and interpreting this broader landscape—including its trails, viewpoints, and relationships to surrounding land and seascapes—is an important objective for mana whenua.

As the mauka is within Te Rūnanga o Ōtākou rohe and is a Wāhi Tupuna Mapped Area (Pukemata), Hereweka and its immediate setting should remain free from inappropriate development. Enhancement of this cultural landscape includes restoration of indigenous vegetation, particularly fruiting species associated with mahika kai, and consideration of future species reintroductions where appropriate.

A partial assessment of Māori archaeological sites has been undertaken, but further work is required. A cultural opportunities mapping exercise with Te Rūnanga o Ōtākou will identify opportunities for cultural expression, education, and practice, including planting of rongoā species and culturally significant harakeke varieties.

The statutory acknowledgement for Te Tai o Arai Te Uru (Otago Coastal Marine Area) under the Ngāi Tahu Claims Settlement Act is relevant to the property and reinforces the need to recognise Kāi Tahu cultural, spiritual, historic, and traditional associations with the wider landscape.

## **Aim**

1. The Hereweka Harbour Cone property is managed in a manner that recognises, protects, and actively expresses its cultural significance to mana whenua.

## **Objectives**

1. To identify, protect, and conserve sites and landscapes of cultural significance to mana whenua.
2. To support appropriate cultural access and use by mana whenua, including the harvest of cultural materials where appropriate.
3. To ensure enhancement and restoration activities are consistent with the cultural values of mana whenua and the wider cultural landscape.
4. To ensure mana whenua are genuinely represented in governance, planning, and decision-making relating to land management.

## **Policies**

1. Protect and conserve wāhi tapu, wāhi taoka, and other sites of cultural significance in a culturally appropriate manner and in partnership with mana whenua.
2. Complete a comprehensive cultural assessment of the property, including development of an inventory of sites and landscapes of significance to mana whenua.
3. Undertake a cultural opportunities mapping exercise with Te Rūnanga o Ōtākou to guide cultural expression, planting, interpretation, and access.
4. Encourage the consistent use and promotion of traditional place names, including Hereweka, across signage, interpretation, and publications.
5. Provide for traditional trail routes and cultural access by mana whenua where appropriate.
6. Apply relevant provisions of the Dunedin City Council Reserves Management Plan – General Policies relating to the harvest of cultural materials.
7. Ensure the Hereweka Harbour Cone property remains free from inappropriate development and that all activities are consistent with its cultural significance.
8. Consult with Te Rūnanga o Ōtākou on all matters that may affect cultural values, including ecological restoration, species management, and public access.
9. Ensure all archaeological discoveries of Māori origin are notified to the Ministry for Culture and Heritage and mana whenua.
10. Recognise and uphold the role of mana whenua as kaitiaki of taoka tūturu in accordance with the Protected Objects Act 1975.
11. Acknowledge and give effect to the statutory acknowledgement for Te Tai o Arai Te Uru in relevant management decisions.
12. Provide interpretative signage and educational material explaining Māori history, traditions, mahika kai practices, and kaitiakitaka values associated with the property.

## 8.2 Historic Sites, Structures, and Cultural Landscape

Numerous historic sites and structures associated with early Pākehā settlement have been identified within the Hereweka Harbour Cone property and recorded in the New Zealand Archaeological Association Site Recording Scheme. While none are currently entered on the Heritage New Zealand Pouhere Taonga List/Rārangi Kōrero, these places are archaeological sites protected under the Heritage New Zealand Pouhere Taonga Act 2014, and any modification or disturbance requires appropriate statutory authority.

An initial archaeological survey was completed in 2008 by Angela Middleton, providing baseline recording of sites and features across the property and identifying multiple areas of heritage significance. Subsequent, more targeted investigations have included detailed recording of the Larnach farmstead barn prior to its dismantling in 2018 under an archaeological authority from Heritage New Zealand Pouhere Taonga, and a 2019 condition assessment of the Rutherford's Farm complex, focusing on the state of stone structures and associated features.

The Hereweka Harbour Cone Conservation Plan (2020) identifies sixty heritage items across the property and documents their historic function and significance. It also evaluates their current condition, integrity, and the principal risks affecting their long-term conservation, providing a framework for prioritising protection and restoration efforts.

While all heritage structures are valued components of the Hereweka cultural landscape, it is acknowledged that finite resources and practical constraints mean not all structures can be fully restored or maintained in perpetuity. Prioritisation will therefore be required, with conservation efforts focused on structures of highest significance or vulnerability, and where restoration is not feasible, alternative approaches — such as the careful salvage and reuse of historic materials to support the conservation of other heritage sites — may be considered.

The historic landscape of Hereweka Harbour Cone extends beyond the property boundary and is best understood as part of a wider pastoral and cultural landscape. This includes early farm infrastructure, boundary walls, access routes, plantings, and spatial relationships with neighbouring estates. In particular, historic and functional associations with Larnach Castle and its former landholdings form part of the broader heritage context and should be recognised in management and interpretation.

Public access to historic sites presents valuable opportunities for education and interpretation. However, some sites are fragile, archaeologically sensitive, or culturally significant, and access must be carefully planned and managed to prevent physical damage, avoid inadvertent disturbance, and respect mana whenua values.

Further archaeological investigation and condition assessment may be required to better understand the extent, significance, and conservation needs of historic features. Conservation planning will guide protection, stabilisation, restoration, monitoring, and appropriate levels of public access in a manner consistent with statutory requirements and best-practice heritage management.

Interpretation should present a balanced account of both Māori and Pākehā histories, acknowledging their interactions with the land and the layered cultural narratives that shape the Hereweka landscape. This should be supported by robust documentation, research, and public education initiatives that enhance understanding while safeguarding heritage values.

### Aim

1. The historic and cultural heritage of the property is understood, protected, and appropriately interpreted.

## Objectives

1. To prevent further deterioration of significant archaeological sites and heritage structures.
2. To manage historic sites in accordance with best-practice conservation principles.
3. To conserve and retain the material authenticity of the historic environment by enabling the careful salvage and reuse of heritage building materials, where restoration of original structures is not feasible.
4. To ensure heritage sites are not adversely affected by farming, restoration activities, or public use.
5. To provide safe and appropriate public access to selected heritage sites.
6. To recognise the property as part of a wider historic and cultural landscape.
7. To support community and volunteer involvement in heritage protection.
8. To improve public understanding of the area's Māori and Pākehā settlement history.

## Policies

1. Prepare and implement conservation and management plans for priority sites, focusing on areas of high significance or vulnerability.
2. Obtain and comply with all required archaeological authorities for works affecting heritage sites.
3. Recognise mana whenua as kaitiaki of taoka tūturu in accordance with legislation.
4. Manage archaeological sites and heritage structures in accordance with approved conservation and management plans and recognised best practice.
5. Encourage supervised community participation in heritage conservation activities where appropriate.
6. Monitor visitor impacts and restrict access to sensitive sites where necessary.
7. Advocate for recognition and protection of the wider cultural landscape beyond the property boundary.
8. Consider adaptive re-use of historic buildings for visitor or interpretive purposes where this does not compromise heritage values.
9. Consider the salvage and reuse of historic building materials from structures that are demonstrably beyond feasible restoration, where such reuse supports the conservation, stabilisation, or interpretation of other heritage structures on the property.
10. Any salvage of historic materials for reuse must be preceded by appropriate documentation and recording. Salvage must be undertaken in accordance with approved conservation plans and statutory requirements and must not compromise the heritage values of either the donor site or the recipient site.
11. Salvaged materials should be clearly documented, and their provenance retained as part of the site's historical record.
12. Treat vegetation management and tree removal on heritage sites as archaeological activities requiring appropriate approvals.

13. Where existing macrocarpa or other exotic shelterbelts and specimen trees contribute to historic, cultural, or landscape values, consider replacement planting to maintain continuity of shelter, landscape form, and cultural character as trees decline or fail.
14. Integrate replacement planting with indigenous restoration where appropriate, while retaining the recognisable structure and cultural legibility of historic planting patterns.
15. Ensure farming activities do not damage heritage sites or structures.
16. Actively seek funding to support archaeological research, conservation, interpretation, and public education.
17. Prohibit unauthorised searching for or removal of historic objects.
18. Retain historic objects found on the property for future on-site interpretation, subject to statutory requirements.

## 9.0 Visitor and Commercial Use

### 9.1 Recreation Use

Public access has been a feature of the Hereweka Harbour Cone property for many years. The property is used by local residents and its proximity to the city means it is also enjoyed by the wider Dunedin community. As the profile of the property increases through improved access, interpretation, and integration with wider peninsula networks, use by visitors and tourists is also likely to increase.

The property's size, landform, and landscape character provide for a spectrum of recreation experiences, from physically demanding ridge routes to lower-gradient connector tracks. Horse riding and mountain biking may be provided on designated routes where gradients, surfaces, stock management, and conflict risk can be appropriately managed. Motorised recreation (including 4WD vehicles and motorcycles) is not permitted, as it is inconsistent with the property's landscape, ecological, and visitor-experience values. Most routes across the property traverse steep and exposed terrain and will be managed to reflect Advanced user experiences under the Dunedin Tracks Plan classification framework. However, a limited number of routes and areas near primary entrances may be developed and managed as Easier Access Areas where terrain and values allow, including consideration of accessible or stroller-suitable connections where feasible (for example, through areas such as Future Forest), without compromising landscape character or ecological and heritage values.

The Hereweka Harbour Cone property is also managed as a working pastoral landscape. Farming operations and grazing management must be designed to be complementary to the property's values and public access. Temporary restrictions may be required for safety and operational reasons, including lambing, but restrictions should be applied only where necessary and for the shortest practicable period.

Dogs are not permitted on the property, except for farm management purposes, in order to protect stock, wildlife, and visitor safety. Dog management will be governed by the Dunedin City Council Dog Control Bylaw and associated policies and will be clearly communicated.

Camping and freedom camping are generally not appropriate within the property due to the lack of suitable facilities, and the risk of adverse effects on ecological, heritage, and farming values. The Dunedin City Council Camping Control Bylaw 2015 regulates freedom camping on land administered by the Council across the city.

#### Aim

1. The Hereweka Harbour Cone property is available for safe and enjoyable recreation that is consistent with the property's values.

#### Objectives

1. To support a range of recreation uses that are compatible with the property's landscape, ecological, cultural, heritage, and farming values.
2. To manage multi-use access in a way that reduces conflict between user groups and protects sensitive areas.
3. To provide for improved connectivity within the property and to wider Otago Peninsula recreation networks where compatible with property values.

4. To provide for a limited number of Easier Access Areas where terrain and values allow, including consideration of accessible routes.

## **Policies**

1. Walking is supported across the track network; mountain biking and horse riding are provided for only where routes are specifically assessed and designated as suitable.
2. Motorised recreation is not permitted (excluding management, emergency, and authorised farm vehicles).
3. Public access across most of the property is classified as “Advanced”, except for identified Easier Access Areas.
4. The public are encouraged to remain on marked routes, particularly where sites are sensitive or vulnerable.
5. Visitor impacts and safety will be monitored, and routes may be temporarily or permanently restricted to all users, or to certain uses (e.g., biking or horse riding), where necessary to protect values or manage risk.
6. Any farm-related closure (including lambing) will be applied only where necessary, for the minimum practicable period, and will be clearly communicated through signage and public channels.
7. Applications for bylaw exemptions to permit camping will be considered only where the proposed activity is complementary to the property’s values, is consistent with the other policies of this Plan, and provides wider social or educational benefits.
8. Dogs are prohibited except for farm management purposes, unless otherwise permitted through provisions of a Council dog control bylaw or policy.

## **9.2 Visitor Use**

The Hereweka Harbour Cone property provides an accessible setting in which people can experience and learn about the Otago Peninsula’s natural, cultural, and historic values. Active community participation can strengthen local stewardship and contribute to ecological restoration, heritage protection, education, visitor management, and the ongoing care of projects and public spaces.

Community involvement that supports the objectives and policies of this Plan is encouraged. All activities and works must, however, be appropriately coordinated and undertaken under the supervision of individuals, groups, or organisations with relevant expertise and the necessary approvals. Formal partnerships or agreements may be established where these would support high-quality, enduring outcomes and provide clarity about roles, responsibilities, standards, management, and maintenance.

The property provides strong opportunities for environmental education and outdoor learning, biodiversity restoration, sustainable land management, cultural landscape understanding, and early settlement history. Research projects that improve understanding of the property’s values and inform management will be encouraged, including partnerships with tertiary institutions.

All organised activities, research, or enhancement works (including track works, vegetation works, installation of structures, or works near heritage sites) require appropriate approvals and statutory authorisations.

## **Aims**

1. Community initiatives, participation, and research are supported and underpinned by stewardship.
2. Research increases understanding of the property's values and informs adaptive management.
3. Organisations, groups, and volunteers are able to participate in the protection and enhancement of the property's values.
4. Educational use is supported where it is compatible with the property's values.
5. Local communities benefit through appropriate community initiatives and partnerships.

## **Objectives**

1. To encourage research that informs management and improves outcomes.
2. To support skilled organisations and volunteers to contribute to protection and enhancement works.
3. To support education that increases awareness and understanding of the property's values and the wider environment.
4. To support appropriate community initiatives that contribute to social cohesion, property values, and an ethic of stewardship.
5. To consider provision of a facility for specialised education aimed at increasing knowledge of the environment, sustainability and heritage which could also provide for other community activities and visitor infrastructure.

## **Policies**

1. Support educational use of the property where this is in alignment with property values and uses and can be undertaken within health and safety expectations for this rural property.
2. Support the development of on-site and off-site interpretation, programmes, and online information that educates people on the property's values.
3. Support proposals for initiatives, research, or enhancement works where these include assessment of effects and mitigation measures, are appropriately resourced and will contribute to the values, understanding, or management of the property.
4. Support research and trials that contribute to an understanding of environmental regeneration, sustainable land use, and ecosystem functioning.
5. Encourage partnerships with mana whenua, community groups, and specialist organisations where these support management objectives and provide for long-term stewardship outcomes.
6. Require all organisations, groups, or persons to independently gain all relevant statutory authorities necessary to undertake their activities.
7. Encourage links with tertiary institutions and relevant agencies to promote research and education aligned with management needs.
8. Ensure all volunteer activities are conducted in accordance with the Volunteering and Education section of the Reserves Management Plan General Policies.

9. Work with interested stakeholders in considering the feasibility of an environmental education centre/visitor hub and base for community activities related to this property.

### 9.3 Visitor Infrastructure

The Hereweka Harbour Cone property is highly valued for its expansive landscape vistas, open space, and rural character, and is an important public amenity for the Dunedin community. Visitor infrastructure is necessary to support safe and meaningful public enjoyment; however, such provision must remain minimal, carefully located, and sensitively designed to protect the property's landscape, cultural, historic, and ecological values.

Public access will be encouraged in areas that showcase significant landscape, cultural, heritage, and biodiversity features. Decisions regarding access and infrastructure will be informed by site vulnerability, terrain, visitor safety, and the need to retain the property's predominantly rural and undeveloped character. Given the steep topography and desire to maintain a low level of modification, most tracks will be classified as 'Advanced' and will generally involve minimal earthworks or structural intervention.

Track development will prioritise the maintenance and improvement of existing routes, the completion of logical circuit connections, and safety enhancements on steep or high-use sections. Opportunities to provide select Easier Access routes, including options for people with limited mobility, will be considered where terrain allows. Connections to wider Otago Peninsula track networks will be supported where compatible with the property's values. Track expansion onto neighbouring private properties may provide opportunities to create additional connections that improve accessibility, and strengthen landscape, recreational, and ecological values. Any such connections will be subject to landowner agreement and formalised through appropriate legal mechanisms, such as easements, licences, or memoranda of understanding. All proposals will require careful assessment of landscape, cultural, ecological, and operational effects prior to implementation.

"Easier Access Areas" will generally be located in more moderate terrain and near primary entrances, such as the Bacon Street access. These areas may accommodate a slightly higher level of infrastructure, including improved fence crossings, drainage works, limited boardwalks, or seating where required.

Any proposal to establish or upgrade tracks must be assessed for effects on biodiversity, archaeological and heritage values, erosion risk, landscape character, potential user conflict, and ongoing maintenance requirements. Mountain biking may be accommodated on selected routes where appropriate, while walking will retain priority in more sensitive areas.

Some multi-use infrastructure may be necessary to reduce user conflict and improve accessibility. This may include installing sprung gates rather than stiles to accommodate horse riders and other authorised users. Visitor amenities such as barbecues and picnic tables are not considered appropriate given the desired character of the property.

Vehicle access and existing car parking currently rely on roadside shoulders, but as visitation increases, additional parking provision may be required. This could include the expansion or formalisation of shoulder parking, where safe and practicable, enhancements at the Bacon Street entrance, or as part of a future visitor hub. Any parking upgrades or vehicle accessways must be carefully assessed to ensure they do not adversely affect landscape character, safety, or neighbouring properties.

Public toilets may be established if necessary, including potential upgrades to the existing facility near the woolshed, noting that public toilets are currently available in Portobello and Broad Bay. The

need for additional facilities will be evaluated in relation to visitor numbers, servicing requirements, and overall effects on the property's character and values.

Signage and interpretation will support route-finding and enhance understanding of the site's landscape, cultural, historic, and ecological values (refer Section 9.4). Any visitor hub should prioritise the adaptive reuse of existing buildings where feasible and be designed and located to avoid adverse effects on landscape character, heritage values, and the rural setting.

### **Aims**

1. Visitor infrastructure supports safe, enjoyable access and protects property values.
2. Visitor infrastructure is minimal and consistent with rural character and landscape values.
3. Tracks support internal circuits and appropriate links to wider peninsula networks.

### **Objectives**

1. To encourage public access into and through the property where appropriate.
2. To provide for connectivity within the property and, where compatible, links to surrounding track networks.
3. To provide Easier Access Areas and accessible-route opportunities where feasible.
4. To provide access points and parking that are safe and fit for purpose, with minimal landscape impact.

### **Policies**

1. Provide visitor infrastructure where it is necessary, and ensure it is low-impact, fit-for-purpose, and consistent with property values.
2. Manage most routes as "Advanced," with Easier Access Areas provided only where terrain and values allow.
3. Maintain and upgrade route marking and track surfaces where necessary for safety, including targeted improvements to routes used by those with limited mobility.
4. Develop track connections and circuits where these improve safety, reduce user conflict, improve accessibility, and protect or enhance values, or recreation outcomes.
5. Track planning and promotion will support connections to wider peninsula walking and cycling networks where consistent with property values, including investigation of multi-day walking/cycling opportunities as part of a broader Otago Peninsula recreation network.
6. Assess proposals for new or upgraded tracks (including MTB and horse routes) against biodiversity, heritage, landscape, erosion, safety, and maintenance requirements, and manage other routes as walking-only where appropriate.
7. Provide and maintain access structures to support multi-use access, reduce conflicts with farming, and support users with reduced mobility where feasible.
8. Provide, promote, and maintain suitable access points for public use, and adequate car parking.

9. Investigate and formalise strategic access connections through private properties that enhance the property's accessibility, values and route continuity, securing them through appropriate legal mechanisms and subject to assessment and any statutory requirements.
10. Do not provide infrastructure inconsistent with the property's character (e.g., picnic facilities or extensive furniture).
11. Consider toilets only if justified by use levels and able to be provided without compromising values, preferably through adaptive reuse of existing assets if practicable.

## 9.4 Signage and Interpretation

Signage and interpretation will enhance visitors' enjoyment, understanding, and appreciation of the Hereweka Harbour Cone property by highlighting access points, explaining the site's significant landscape, cultural, heritage, and ecological values, and encouraging community stewardship. Well-planned signage will also support effective visitor management by guiding appropriate use, discouraging access to vulnerable areas, and alerting visitors to unusual or significant hazards. Signage will be unobtrusive, consistent in style, limited in quantity, and designed to maintain a low visual footprint, with information consolidated at entrances and key junctions wherever possible.

Property boundary markers will be installed at key locations to define the extent of the property and reduce the likelihood of accidental trespass onto neighbouring private land. A coordinated system of route markers and directional signage at potentially confusing junctions will assist public navigation and enjoyment.

Given the multi-use nature of tracks and the steep terrain, signage will clearly identify permitted uses (such as walking, mountain biking, or horse riding where designated) and indicate where certain activities are not permitted. Information regarding the legal protection of archaeological sites, including guidance relating to taoka tūturu and archaeological protections will be necessary at key access points and significant sites. Signs will also communicate seasonal restrictions and hazard warnings where required. Route marking will rely on simple, durable systems that are appropriate to the landscape character.

Interpretation signage will play a crucial role in communicating the layered Māori and Pākehā histories of the property and the wider cultural landscape. Due to the complexity of the site, specialist input in interpretation planning will be sought to ensure content is accurate, engaging, and culturally appropriate. The style and materials of interpretation signage must be sympathetic to the physical and historical landscape.

Digital platforms will complement on-site signage and serve as the primary source for detailed route information, including multi-use designations and accessibility notes. QR codes may link visitors to online maps and more detailed interpretive content. Additional interpretation opportunities may include a sensitively designed Visitor Hub (refer Section 9.3), brochures, web-based resources, and collaboration with Otago Peninsula community groups to strengthen local connections and shared stewardship.

### Aim

1. Signage and interpretation enhance visitor enjoyment, safety, and understanding of the property's values while maintaining a low visual impact and respecting landscape and cultural character.

## **Objectives**

1. To provide interpretation that deepens understanding of the property's landscape, cultural, heritage, and ecological values and promotes community stewardship.
2. To provide clear and effective signage that supports safe access, appropriate use, and protection of sensitive areas.
3. To deliver a high-quality and consistent signage system that integrates on-site information with online resources to support wayfinding and interpretation.

## **Policies**

1. Develop and implement a Signage and Interpretation Plan that is consistent in style, low-impact, and promotes, protects, and enhances the property's landscape, cultural, heritage, and ecological values.
2. Work in partnership with mana whenua to develop and provide bilingual signage at culturally significant sites, ensuring te reo Māori is appropriately represented and content reflects Kāi Tahu narratives, values, and tikanga.
3. Provide boundary markers, entrance signage, route markers and junction signage sufficient to support safe wayfinding and reduce accidental trespass.
4. Provide clear information on permitted uses, including designated mountain bike and horse routes, and walking-only areas where applicable.
5. Provide signage where required to communicate legal protections of cultural and heritage sites, key hazards, and seasonal restrictions.
6. Use QR codes and online sources to provide supplementary wayfinding and interpretive information, reducing the need for additional on-site signage.
7. Support adjoining landowners to manage access interfaces and information where appropriate.
8. Support the development of additional off-site promotional and interpretive materials and investigate future on-site interpretation opportunities, to promote and communicate the property's values.

## **9.5 Authorisations, Commercial and Exclusive Use, Special Events and Occupation Agreements**

Use of areas within the Hereweka Harbour Cone property for organised activities, including commercial operations, exclusive use events, filming, guided tours, and special events, will be supported only where such use does not adversely affect the property's landscape, cultural, heritage, or ecological values, or unreasonably limit casual public access and enjoyment. Applications for permanent or temporary use will require appropriate authorisation and will be considered on their merits, with particular regard to cumulative effects and the ability to appropriately manage impacts.

Council practice is to work in accordance with the provisions of the Act, even where land is not formally subject to that Act. Authorisations may therefore be granted in the form of written approvals, leases, licences, concessions, or occupation agreements issued by the Dunedin City Council as landowner and administering authority. Council will retain responsibility for decisions relating to leases, licences, and other occupation agreements, and will consult with the Trust on

proposals and operational matters relevant to the Trust's management role. Proposals will be assessed against the aims, objectives, and policies of this Management Plan, the Dunedin City Council Reserves Management Plan – General Policies, operational practicality, and the cumulative effect of organised uses on the property's values.

Occupation agreements may also be used to formalise ongoing or long-term uses, such as farming, rights-of-way, water rights, stormwater discharge, drainage rights, underground services, or other infrastructure. Low-impact farming and sheep grazing are important management tools for the property. Any licensing or leasing arrangement must be structured to complement the property's objectives, including public access, heritage protection, ecological restoration, and safety. Requests to access land or water will be considered where consistent with this Management Plan and relevant statutory requirements.

Authorisations for commercial activities will generally be granted for a limited term of no more than 14 years (or, in the case of a licence, up to five years) — with provision for annual review to ensure continued compatibility with the property's values. To ensure that management is not burdened with costs associated with such use, authority holders will be required to pay activity fees appropriate to the type of use and meet all costs related to their activity, including any contributions to general visitor infrastructure where applicable. Fees and rentals will be guided by the Dunedin City Council Reserves Management Plan General Policies and the Dunedin City Council Fees and Charges Policy.

The granting of a DCC authorisation or occupation agreement does not remove the holder's responsibility to obtain and maintain any other statutory approvals required for the activity and to comply with all applicable legislation, regulations, bylaws, district plan provisions, resource consent conditions and other legal requirements, including those relating to health and safety and food safety.

### **Aim**

1. Organised or commercial use and occupation are authorised only where compatible with property values and considered not detrimental to casual public enjoyment.

### **Objectives**

1. To provide for organised use where it is compatible with the property's values and other users.
2. To ensure all commercial use and occupation are properly authorised, monitored, and managed.

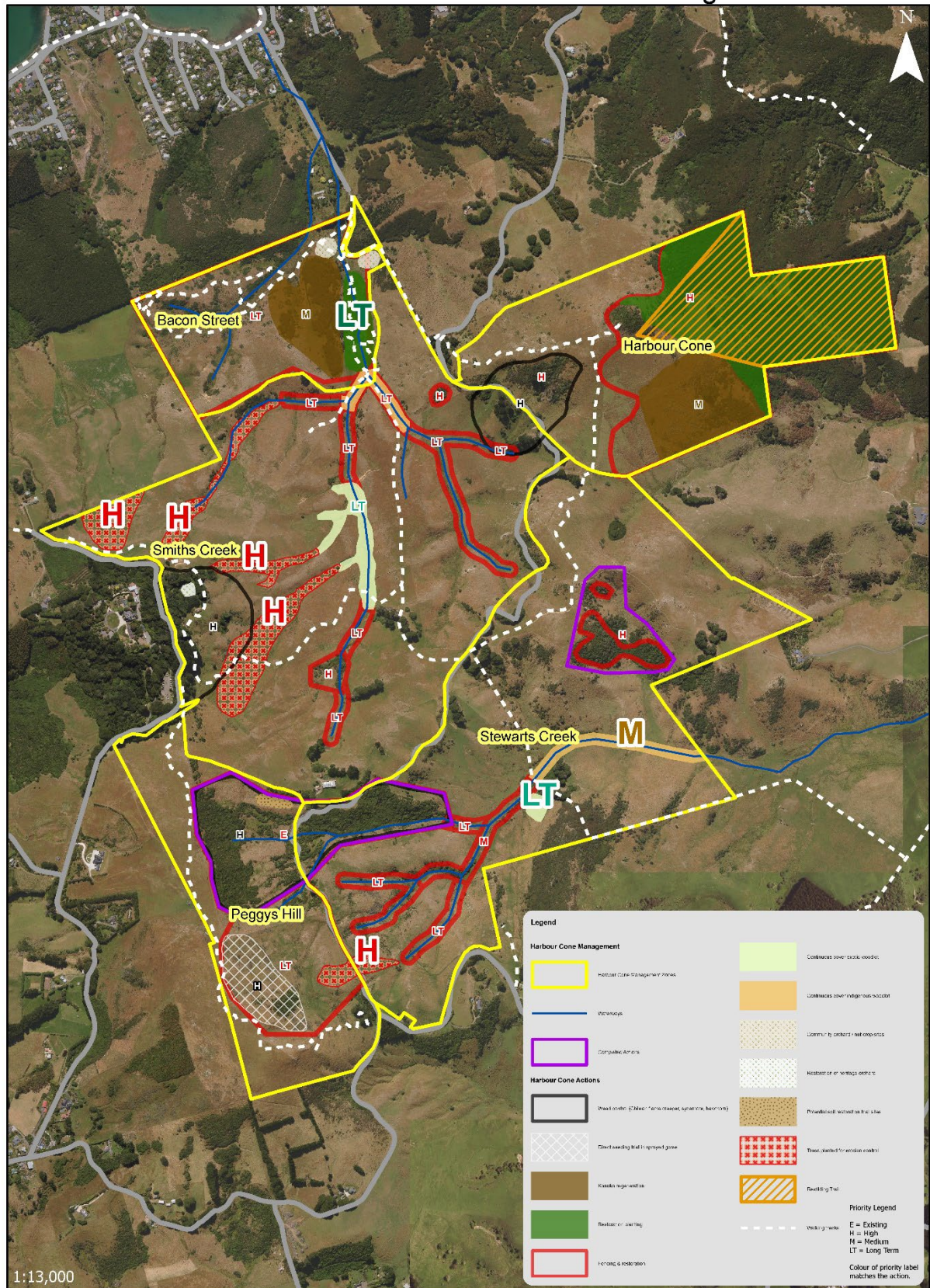
### **Policies**

1. Relevant sections of the Dunedin City Council Reserves Management Plan – General Policies relating to commercial use, exclusive use, special events, and occupation agreements apply and must be read in conjunction with this plan.
2. Assess all proposals for organised use against effects on property values, public access and enjoyment, safety, cumulative impacts, and benefits to the local community.
3. Require applicants to meet all costs associated with their activity, including monitoring and remediation, unless specifically waived by Council.
4. Commercial users may be required to pay an appropriate fee.

5. Review organised and commercial uses regularly and withdraw approvals where adverse effects cannot be avoided, remedied, or mitigated.
6. Undertake public notification where required or deemed necessary for leases, licences, and occupation agreements.
7. Ensure occupation agreements include clear responsibilities for biosecurity, access interfaces, infrastructure maintenance, and compatibility with ecological and heritage outcomes.
8. Proposed changes to authorisations, informed by the objectives of this plan, will be resolved through discussion between Council and holders of use agreements.
9. Appoint a liaison role through the Trust to coordinate organised uses that have been approved by Council, and to minimise conflicts or operational impacts on Trust activities and other authorised or permitted uses of the property.

## Appendix 1. Land Use Actions and Management

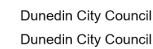
### Hereweka Harbour Cone - Actions and Management



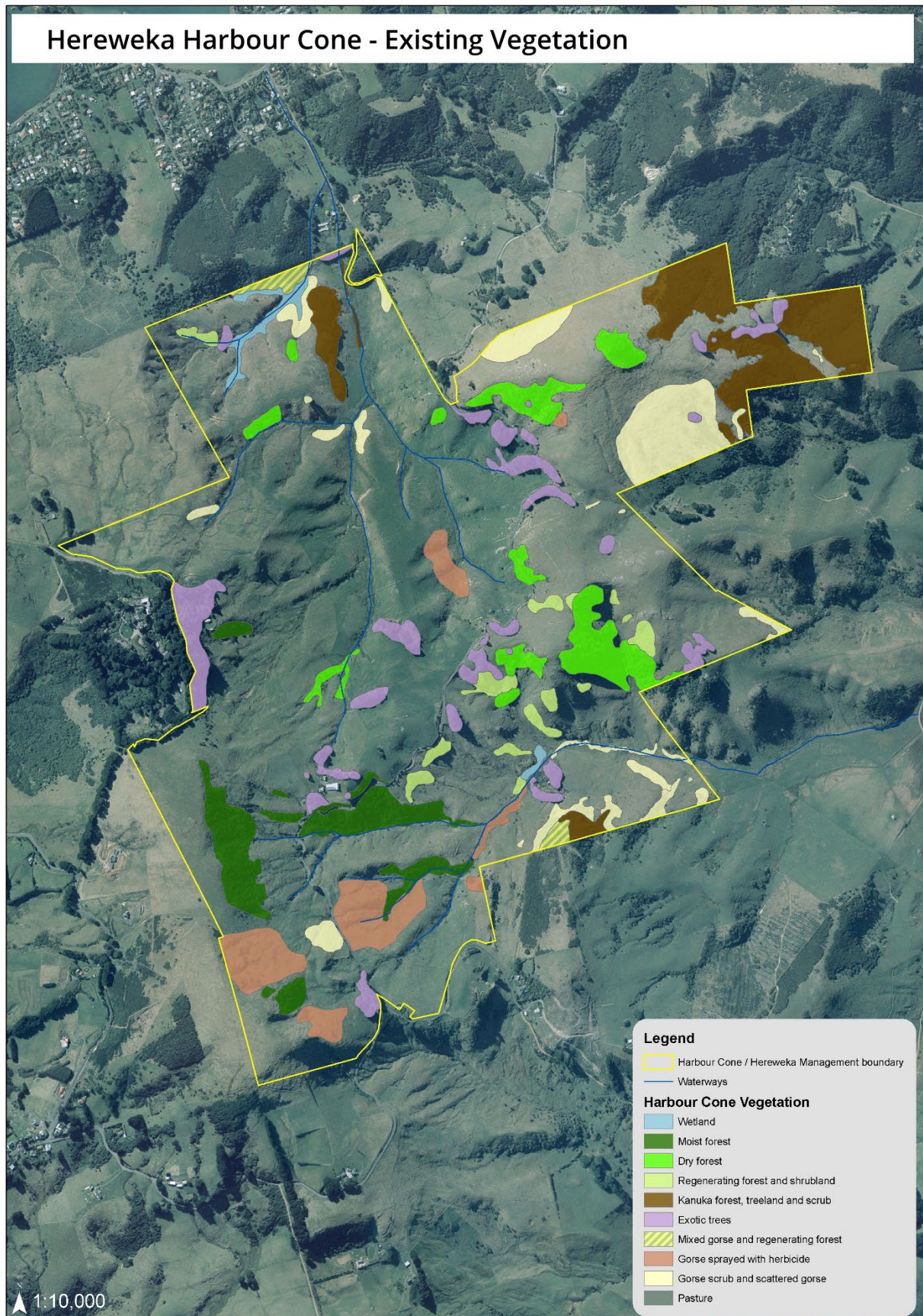
This map displays the Hill Slopes Rural area, characterized by a large, irregularly shaped region outlined in black. The area is divided into several distinct zones, each with a unique color and pattern: a large central area with a light blue diagonal hatching, a green area with a green diagonal hatching to the north, and a yellow area with a yellow diagonal hatching to the east. The map also shows various roads, including Portobello Rd, Highcliff Rd, and Castletown Rd. Several small icons, including a church and a school, are scattered throughout the area. The map is overlaid with a grid of pink and blue lines, and a large, irregularly shaped area is outlined in black.

-  Appeals (polygon)
-  Appeals (point)
-  Property
-  Railway Centreline
-  Formed Roads
-  Road Names
-  Scheduled Industrial Activity
-  Scheduled Mining Activity
-  Dunedin Airport Flight Fan

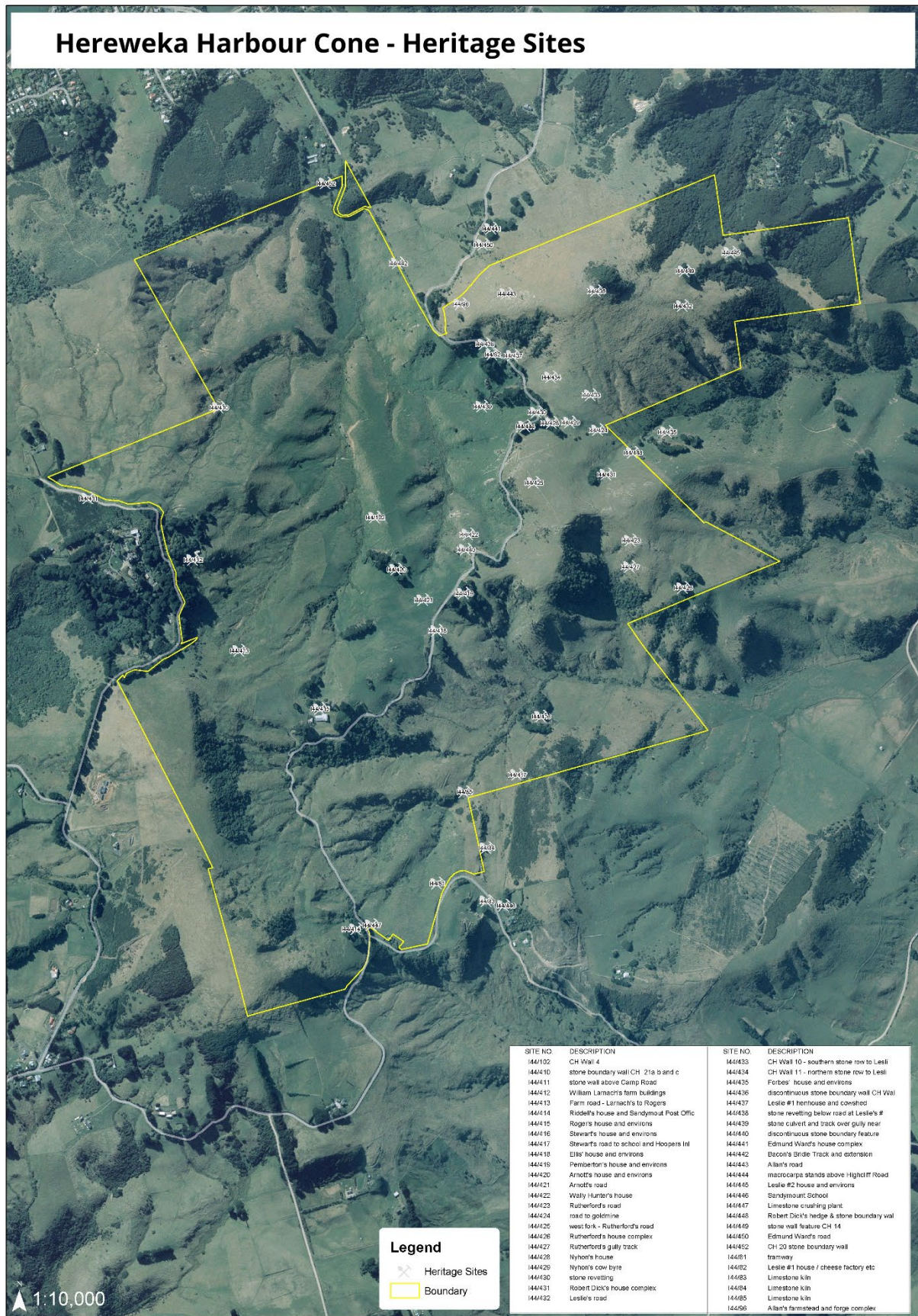
- |  |                                   |  |                                         |  |                                       |  |                             |  |                               |  |                                            |  |              |
|--|-----------------------------------|--|-----------------------------------------|--|---------------------------------------|--|-----------------------------|--|-------------------------------|--|--------------------------------------------|--|--------------|
|  | Sites with Multiple Designations  |  | Character Contributing Building         |  | Hazard 1 (flood)                      |  | Industrial Transition       |  | Swale                         |  | Commercial Centre                          |  | Public Space |
|  | Designations                      |  | Areas of Significant Biodiversity Value |  | Heritage Precinct                     |  | Harbourside Edge Transition |  | Structure Plan                |  | Collector                                  |  | Public Space |
|  | Archaeological Sites              |  | Hazard 3 (coastal)                      |  | Significant Natural Landscape (SNL)   |  | Residential Transition      |  | Stormwater Open Watercourses  |  | Industrial                                 |  | Public Space |
|  | Scheduled Heritage Sites          |  | Hazard 3 (alluvial fan)                 |  | Outstanding Natural Landscape (ONL)   |  | Wastewater Constraint       |  | Stadium Noise Load/Foot Drop  |  | Urban High Density Corridor                |  | Public Space |
|  | Scheduled Tree Groups             |  | Hazard 3 (flood)                        |  | Outstanding Natural Feature (ONF)     |  | Wahia Tupuna                |  | South Dunedin                 |  | Rayburn Street Landscape Building Platform |  | Public Space |
|  | Scheduled Trees                   |  | Hazard 2 (land instability)             |  | Coastal Character                     |  | Version 2                   |  | Road Classification Hierarchy |  | Ravenbourne Height                         |  | Public Space |
|  | Heritage Buildings and Structures |  | Hazard 2 (flood)                        |  | Natural Coastal Character             |  | Urban Biodiversity          |  | Strategic                     |  | Radio Transmitters                         |  | Public Space |
|  | Heritage Building                 |  | Hazard 1 (land instability)             |  | High Natural Coastal Character        |  | Taien Ridge and Mare Burn   |  | Motorway                      |  | Princes, Parry and Harrow Street Height    |  | Public Space |
|  | Heritage Structure                |  | Hazard 1A (flood)                       |  | Outstanding Natural Coastal Character |  | Taien Aerodrome Flight Fan  |  | Arterial                      |  | Portobello Marine Structure                |  | Public Space |



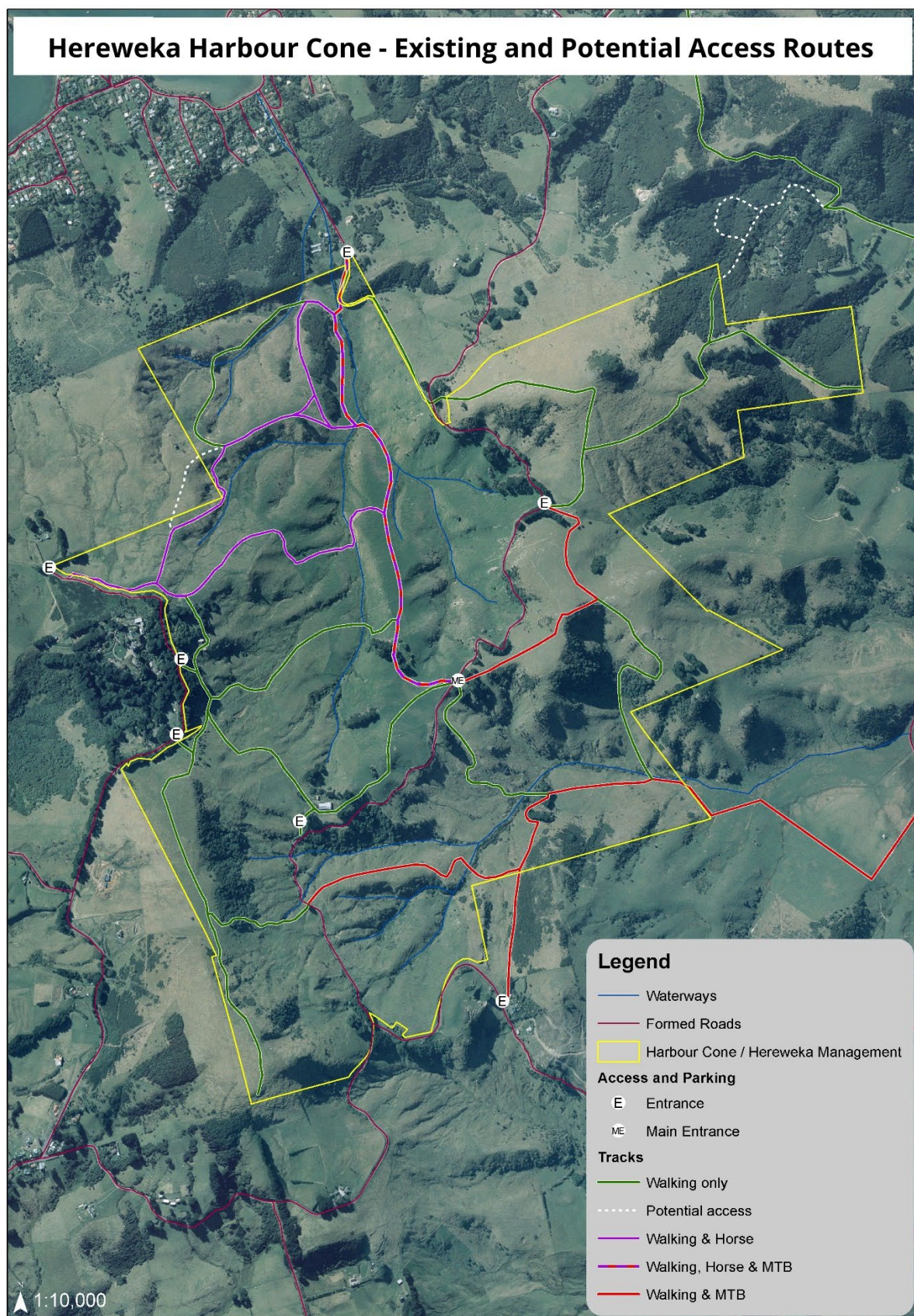
## Appendix 3. Existing Vegetation Map



## Appendix 4. Heritage Sites Map



## Appendix 5. Recreation Routes and Access Map



## Appendix 6. Discussion: The Potential for Reintroduction of Buff Weka (*Gallirallus australis*)

This discussion exists as an example of the complex factors requiring assessment when considering the reintroduction of locally and nationally important species. Hereweka means 'catch weka' and refers to the area being a place where the food resource of weka was found.

Buff weka (*Gallirallus australis hectori*) were historically indigenous to the eastern South Island and Southland but became locally extinct from the South Island due to the effects of habitat loss compounded by predation from exotic pest animals. Fortunately, populations of buff weka had been established on Chatham Island and Pitt Island prior to their extinction from the mainland. This Chatham Islands population has been used as the source of buff weka for re-establishment of weka populations in Canterbury and Otago, although these have not always been successful.

Buff weka is a taoka species to Ngāi Tahu. Papatipu rūnaka, including Otākou rūnaka, have supported its reintroduction to islands in Lakes Wakatipu and Wanaka, and to the adjacent Stevenson's Peninsula. Otākou rūnaka are strong advocates for reintroduction of buff weka to the Hereweka Harbour Cone property and would envisage a successful weka reintroduction as one that resulted in colonisation by buff weka of wider Otago Peninsula habitats in sufficient abundance as to sustain a managed harvest, as occurs on the Chatham Islands.

Weka favour landscapes with thickets of ground cover vegetation such as fernland, shrubland, and vineland, including those comprised of weedy species such as gorse and blackberry. However, areas that support abundant fleshy-fruited indigenous trees and shrubs are ideal. They predominantly eat fruits and invertebrates but are also predators of lizards and chicks of other birds, including penguins. Weka form permanent territories, but sub-adult birds disperse so as to establish new territories or replace the territories of other weka that have been killed.

Adult weka are vulnerable to predation by domestic dogs and cats, ferrets and stoats, while eggs and nestlings are vulnerable to predation by hedgehogs and rats. Drought and periods of low rainfall are also factors that periodically reduce weka survival. Many weka are killed in collisions with road traffic. They are also vulnerable to pest control activities such as use of poison baits and leghold traps.

Buff weka would be vulnerable to all of the above influences at the Hereweka Harbour Cone property. Dense ground cover vegetation is absent from most of the site, with the exception of gorse thickets and locally dense vegetation around buildings. Stock browsing in the indigenous forest remnants has resulted in major depletion of ground cover and understorey vegetation. The full range of weka predators is likely to be present on this property. Otago Peninsula experiences periods of low rainfall and drought and the Hereweka Harbour Cone property is bisected by a well-used public road. Pest control activities would need to be designed to avoid weka bykill. On the other hand, weka are opportunistic and adaptable and, where they occur in good conditions with abundant food sources, can breed frequently and rapidly increase in numbers.

A major constraint involving weka is their potential for adverse effects through predation of other threatened indigenous fauna. For example, if buff weka were successfully established on the Hereweka Harbour Cone property and dispersed into the wider area, they could potentially affect valued nesting shorebirds such as penguins.

The issues described above need to be given more consideration. If a feasibility study for buff weka introduction is undertaken, it should address all of the factors and indicators relevant to mainland sites, as specified in Appendix 8 of the Weka Recovery Plan (DOC 1999).

## Appendix 7. Statutory Acknowledgement

### Ngāi Tahu Claims Settlement Act 1998 Schedule 103

#### Statutory Acknowledgement for Te Tai o Arai Te Uru (Otago Coastal Marine Area)

The statutory area to which this statutory acknowledgement applies is Te Tai o Arai Te Uru (the Otago Coastal Marine Area), the Coastal Marine Area of the Moeraki, Dunedin Coastal and Molyneux constituencies of the Otago region, as shown on SO Plans 24250, 24249, and 24252, Otago Land District and as shown on Allocation Plan NT 505 (SO 19901).

#### Preamble

Under section 313, the Crown acknowledges Te Rūnanga o Ngāi Tahu's statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Te Tai o Arai Te Uru as set out below.

#### Ngāi Tahu Association with Te Tai o Arai Te Uru

The formation of the coastline of Te Wai Pounamu relates to the tradition of Te Waka o Aoraki, which foundered on a submerged reef, leaving its occupants, Aoraki and his brothers, to turn to stone. They are manifested now in the highest peaks in the Ka Tiritiri o Te Moana (the Southern Alps). The bays, inlets, estuaries and fiords which stud the coast are all the creations of Tu Te Rakiwhanoa, who took on the job of making the island suitable for human habitation.

The naming of various features along the coastline reflects the succession of explorers and iwi (tribes) who travelled around the coastline at various times. The first of these was Maui, who fished up the North Island and is said to have circumnavigated Te Wai Pounamu. In some accounts the island is called Te Waka a Maui in recognition of his discovery of the new lands, with Rakiura (Stewart Island) being Te Puka a Maui (Maui's anchor stone). A number of coastal place names are attributed to Maui, particularly on the southern coast. The great explorer Rakaihautu travelled overland along the coast, identifying the key places and resources. He also left many place names on prominent coastal features. Another explorer, Tamatea, sailed along the Otago coast in the waka Tākitimu. After the waka eventually broke its back off the coast of Murihiku, Tamatea and the survivors made their way overland back to the North Island, arriving at the coast by the place Tamatea named O-amaru (Ōamaru).

Place names along the coast record Ngāi Tahu history and point to the landscape features which were significant to people for a range of reasons. For example, some of the most significant rivers which enter the coastal waters of Otago include: Waitaki, Kakaunui, Waihemo (Shag), Waikouaiti, Kāikrae (Kāikorai), Tokomairiro, Mata-au (Clutha), Pounawea (Catlins). Estuaries include: Waitete (Waitati), Ōtākou (Otago), Makahoe (Papanui Inlet), Murikauhaka (Mate-au and Koau estuaries), Tahaukupu (Tahakopa estuary), Waipātiki (Wapiti Estuary). Islands in the coastal area include Okaihe (St Michaels Island), Moturata Island), (Taieri Paparoa, Matoketoke, Hakinikini, and Aonui (Cooks Head).

Particular stretches of the coastline also have their own traditions. The tradition of the waka (canoe) Arai Te Uru and its sinking at the mouth of the Waihemo (Shag River) has led to the coastal area of Otago being known as Te Tai o Araiteuru (the coast of Arai Te Uru). Accounts of the foundering, the wreckage and the survivors of this waka are marked by numerous landmarks almost for the length of the Otago coast.

The boulders on Moeraki coast (Kai Hinaki) and the Moeraki pebbles are all 63 associated with the cargo of gourds, kumara and taro seed which were spilled when the Arai Te Uru foundered.

For Ngāi Tahu, traditions such as these represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Because of its attractiveness as a place to establish permanent settlements, including pā (fortified settlements), the coastal area was visited and occupied by Waitaha, Ngāti Māmoë and Ngāi Tahu in succession, who, through conflict and alliance, have merged in the whakapapa (genealogy) of Ngāi Tahu whānui. Battle sites, urupā and landscape features bearing the names of tūpuna (ancestors) record this history. Prominent headlands, in particular, were favoured for their defensive qualities and became the headquarters for a succession of rangatira and their followers. Notable pā on the Otago coast include: Makotukutuku (Ōamaru), Te Raka-a hineatea (Moeraki), Te Pā Katata, Pā a Te Wera, (Huriawa Peninsula), Mapoutahi (Purakaunui), Pukekura (Taiaroa Head), Moturata (Taieri Island). The estuaries from the Waitaki River to the Chaslands also supported various hapu.

Tūpuna such as Waitai, Tukiauau, Whaka-taka-newha, Rakiiāmoa, Tarewai, Maru, Te Aparangi, Taoka, Moki II, Kapo, Te Wera, Tu Wiri Roa, Taikawa, Te Hautapanuiotu among the many illustrious ancestors of Ngāti Māmoë and Ngāi Tahu lineage whose feats and memories are enshrined in the landscape, bays, tides and whakapapa of Otago.

The results of the struggles, alliances and marriages arising out of these migrations were the eventual emergence of a stable, organised and united series of hapu located at permanent or semi-permanent settlements along the coast, with an intricate network of mahika kai (food gathering) rights and networks that relied to a large extent on coastal resources. Chiefs such as Korako (several), Tahatu, Honekai, Ihutakuru, Karetai, Taiaroa, Potiki, Tuhawaiki, and Pokene being some among a number who had their own villages and fishing grounds. Otago Peninsula (Muaupoko) had many kaunga nohoanga with a multitude of hapu occupying them. At one time up to 12 kainga existed in the lower Otago harbour, some larger and more important than others.

The whole of the coastal area offered a bounty of mahika kai, including a range of kaimoana (sea food); sea fishing; eeling and harvest of other freshwater fish in lagoons and rivers; marine mammals providing whale meat and seal pups; waterfowl, sea bird egg gathering and forest birds; and a variety of plant resources including harakeke (flax), fern and ti root. In many areas the reliance on these resources increased after the land sales of the 1840s and 1850s, and the associated loss of access to much traditional land based mahika kai.

Many reefs along the coast are known by name and are customary fishing grounds, many sand banks, channels, currents and depths are also known for their kaimoana. One example is Poatiri (Mt Charles — Cape Saunders) the name of which refers to a fishhook. Poatiri juts out into the Pacific, close to the continental shelf, and is a very rich fishing ground. Another example is Blueskin Bay which was once a kohanga (breeding ground) for the right whale, although it is well over 150 years since it has seen this activity.

Other resources were also important in the coastal area. Paru (black mud used for dyeing) was obtained from some areas. Some of the permanent coastal settlements, such as those at the mouth of the Mataau (Clutha River), and at Ōtākou and Purakaunui, were important pounamu manufacturing sites. Trading between these villages to the south and north via sea routes was an important part of the economy.

The Otago coast was also a major highway and trade route, particularly in areas where travel by land was difficult. Pounamu and titi were traded north with 64 kumara, taro, waka, stone resources and carvings coming south. Travel by sea between settlements and hapu was common, with a variety of different forms of waka, including the southern waka hunua (double-hulled canoe) and, post-contact, whale boats plying the waters continuously. Hence tauranga waka (landing places) occur up and down the coast in their hundreds and wherever a tauranga waka is located there is also likely to be a nohoanga (settlement), fishing ground, kaimoana resource, rimurapa (bull kelp — used to make the poha, in which titi were and still are preserved) with the sea trail linked to a land trail or mahika kai resource. The tūpuna had a huge knowledge of the coastal environment and weather patterns, passed from generation to generation. This knowledge continues to be held by whānau and hapu and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the coast. Numerous urupā are being exposed or eroded at various times along much of coast. Water burial sites on the coast, known as waiwhakaheketupapaku, are also spiritually important and linked with important sites on the land. Places where kaitangata (the eating of those defeated in battle) occurred are also wāhi tapu.

Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna and are frequently protected in secret locations.

The mauri of the coastal area represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu whānui with the coastal area.

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