

# Moturoa/Rabbit Island Reserve Management Plan

Te tūhinga hukihuki Mahere Whakahaere o Moturoa

September 2016



# Moturoa/Rabbit Island Reserve Management Plan

September 2016

## Published by:

Tasman District Council  
Private Bag 4  
Richmond  
Nelson 7050  
New Zealand

Tasman District Council is the administering body for the reserves on Moturoa/Rabbit Island, Rough Island and Bird Island. This Plan covers all three Islands.

## Version status:

Amended version, to be considered by Tasman District Council on 22 September 2016 (refer Council Report RCN16-09-08).

This document was published on Council's website: [www.tasman.govt.nz/link/moturoa](http://www.tasman.govt.nz/link/moturoa).

Check any printed copy against the latest online version.

# WHAKATAUKĪ<sup>1</sup>

*To be provided by iwi for Final Plan*



## MOTUROA / RABBIT ISLAND 2016 – 2026

This Reserve Management Plan ('Plan') sets out the vision, objectives, policies and priorities for Moturoa/Rabbit Island<sup>2</sup>, Rough Island and Bird Island ('the Islands') for the next ten years.

Highly valued by our community, the Islands are loved and actively enjoyed by thousands of locals and visitors year round. They are considered one of the treasured gems of Tasman District. The plantation forestry operation on the Islands provides a sustainable economic return to Council, a backdrop to outdoor recreation activities, and a location for land-based disposal of biosolids.

In this Plan, Council confirms its commitment to maintaining this vital community asset and explains the current pressures facing the Islands and how they'll be managed. This document also sets out the proposed priorities for development and improvements on the Islands over the next ten years. These are set carefully against Council's role as guardian of the Islands and its commitment to ensuring the unique environmental and cultural heritage and attributes of the Islands are preserved and celebrated into the future.

## ABOUT THIS DOCUMENT



Moturoa/Rabbit Island, Rough Island and Bird Island are vested in the Tasman District Council ('Council') as a reserve and are managed in accordance with the Reserves Act 1977 ('the Act').

Council adopted the first reserve management plan for the three Islands in 1989 and updated it in 1997 and again in 2001. A complete review of this plan was undertaken during 2016.

Over the summer of 2015/2016 Council invited suggestions and ideas from the public for inclusion in a Draft Plan and consulted with Te Tau Ihu iwi. Note that in this Plan, the term 'iwi' means the eight Te Tau Ihu iwi: Ngāti Apa, Ngāti Kōata, Ngāti Kuia, Ngāti Rārua, Ngāti Tama, Ngāti Toa, Rangitāne and Te Ātiawa. The feedback received helped to inform the development of a Draft Moturoa/Rabbit Island Reserve Management Plan document, which was publicly notified on the 7<sup>th</sup> of May 2016. Submissions closed on the 8<sup>th</sup> of July 2016.

In total, 275 submissions were received on the Draft Plan. Thirty of these submitters spoke to their submission at a hearing on the 1<sup>st</sup> of August 2016. The Hearing Panel, which comprised of four Councillors and two iwi representatives, deliberated on the submissions received on the 8<sup>th</sup> of August 2016. They recommended that Council amend the Draft Plan to incorporate many changes suggested by submitters. The amended Plan was considered and adopted by Council at their meeting on the 22<sup>nd</sup> of September 2016.

<sup>1</sup> Whakataukī (proverbs and sayings) are important in Māori oral traditions. They often refer to important places, people, beings, events, histories, species or symbols.

<sup>2</sup> As a result of the 2014 Treaty Settlements, the Island now has an official dual name: Moturoa/Rabbit Island.

## Foreword

Council has prepared and adopted this ten-year Reserve Management Plan for Moturoa/Rabbit Island, Rough Island and Bird Island ('the Islands'). The Plan lays out the challenges currently facing the Islands and identifies priorities for improvement over the next 10 years. The Plan is available to view online at [www.tasman.govt.nz/link/moturoa](http://www.tasman.govt.nz/link/moturoa).

### KEY CHANGES TO THE MANAGEMENT REGIME FOR THE ISLANDS

Priorities for improvement and key changes to the management regime for the Islands are summarised below:

1. Maintenance and expansion of the existing network of cycling/walking trails through forested areas on the western half of Moturoa/Rabbit Island. Expansions to the network will include extending Faulkners Track to link with Ken Beck Drive and enabling public use of the Recreation Reserve area along Barnicoat Road (see Part 2, Sections 1.1 and 4.1).
2. Development of a Grade 2 mountain bike park on Moturoa/Rabbit Island, adjoining (i.e. west of) the existing mountain bike track in Conifer Park. A large portion of this Recreation Reserve area was logged in 2015 and will be managed for both recreational and forestry purposes for one more rotation of plantation forest (see Part 2, Section 1.1). Pine trees may be removed to develop mountain bike tracks, as required.
3. Provision of a link track for horse riders only, along the eastern side of Ken Beck Drive. This is to provide safe riding access between the Rough Island events and equestrian park and the front beach on Moturoa/Rabbit Island (see Part 2, Section 1.1).
4. Provision of an alternative route for horse riders along Monaco Road at high tide, primarily to avoid damage to bird nesting and roosting areas on the eastern end of the front beach of Moturoa/Rabbit Island. This alternative route will only be available for use by horse riders. Other than Monaco Road and Boat Ramp Road, access to plantation reserve areas on the eastern half of Moturoa/Rabbit Island will be by permit only (see Part 2, Section 1.1).
5. Potential upgrade of either or both of the existing boat ramps on the Islands, to meet the needs of boat owners in the District (see Part 2, Section 1.1).
6. Provision to close the eastern half of Moturoa/Rabbit Island for three weekends each winter (at the end of June, end of July and end of August), to enable organised game bird hunting events to take place on a trial basis, for balloted hunting of pheasants and/or Californian quail (see Part 2, Section 1.1).
7. Progressively providing additional recreational amenities (e.g. information 'hubs', toilets, picnic tables, barbeques and shade sails) over time, to meet increasing visitor demands (see Part 2, Section 1.1).
8. Progressively restoring some of the coastal margins of the Islands with locally-sourced native plant species, to help secure habitat for indigenous species of the Waimea/Waimeha Inlet. This is particularly for those threatened by sea-level rise. A riparian buffer of native vegetation, of a minimum width of 20 metres, will be planted around the coastline of all three islands. The width will be measured from the high tide mark (wherever that may be, depending on erosion or accretion) to a point at least 20 metres inland of this mark. Rongoa/medicinal species will be included within these riparian buffers and may be harvested on a sustainable basis. Appropriate planting will also provide shelter and shade for people using coastal recreational tracks and trails (see Part 2, Sections 1.1 and 2.1).
9. As a result of feedback received on the Draft Plan, Council will undertake a separate public consultation process to change the reserve classification for specific areas on the islands, including a new status of Scenic Reserve for some of the Significant Native Habitat areas (see Part 2, Sections 2.2 and 8).

The Islands are an incredibly special place and we must ensure the future of this vital regional community asset is secure and sustainable. Council believes the improvements, objectives and policies outlined in the Plan will not only protect the Island's unique character and environment, but also provide improved amenities and opportunities for everyone to enjoy.

Council is very grateful for the support, input and expertise of all who have contributed ideas for, and made submissions on, this Plan.

## Table of Contents

Foreword .....	2
Table of Contents .....	3
PART 1 .....	5
Vision & Key Outcomes Sought .....	6
Community Survey .....	8
PART 2 .....	9
Interpretation of Objectives & Policies .....	10
1.0 Recreation .....	11
1.1 VISITOR USE & MANAGEMENT .....	11
1.2 ROUGH ISLAND EVENTS & EQUESTRIAN PARK .....	22
2.0 Environment .....	24
2.1 OVERVIEW OF ECOLOGICAL VALUES .....	24
2.2 SIGNIFICANT NATIVE HABITATS .....	29
3.0 Cultural and Historical .....	35
3.1 IWI ASSOCIATION WITH THE ISLANDS .....	35
3.2 WAHI TAPU, ARCHAEOLOGICAL SITES & TAONGA .....	37
4.0 Forestry and other uses of Local Purpose (Plantation) Reserve .....	40
4.1 FORESTRY .....	40
4.2 BIOSOLIDS .....	45
5.0 Hazards .....	49
5.1 FIRE .....	49
5.2 CONTAMINATED SOILS .....	49
5.3 CLIMATE CHANGE, SEA-LEVEL RISE & COASTAL PROCESSES .....	49
6.0 OTHER MANAGEMENT ISSUES .....	53
7.0 REVIEW OF RESERVE MANAGEMENT PLANS & UPDATES TO OPERATIONAL WORK PLANS .....	56
8.0 CHANGES TO RESERVE CLASSIFICATION .....	57
PART 3 .....	58
Background & Description .....	59
Legislative Context .....	61
Māori History of the Islands .....	63
Past & Present Day Use of the Islands .....	64
History of Land Tenure .....	66
PART 4 .....	67
Ngā Tikanga O Ngā Kupu Māori – Māori Glossary .....	68
Abbreviations & Definitions of Terms .....	71
Appendices .....	72
APPENDIX 1: ACCIDENTAL DISCOVERY PROTOCOL FOR MOTUROA/RABBIT, ROUGH AND BIRD ISLANDS .....	72
APPENDIX 2: CONSISTENCY WITH OTHER COUNCIL STRATEGIES, MANAGEMENT PLANS & POLICIES .....	75

APPENDIX 3: REGISTER OF RESOURCE CONSENTS RELATING TO THE ISLANDS (AS AT SEPTEMBER 2016) .....	77
APPENDIX 4: HISTORY OF LAND TENURE – MOTUROA/RABBIT, ROUGH & BIRD ISLANDS.....	81
APPENDIX 5: THREATENED AND AT RISK COASTAL BIRD SPECIES IN TASMAN DISTRICT .....	88
References.....	89

#### LIST OF TABLES

Table 1:	Projected income from the forestry assets on Moturoa/Rabbit and Rough Islands (2016-2024).....	41
----------	------------------------------------------------------------------------------------------------	----

#### LIST OF FIGURES

Figure 1:	Classification and location of reserve areas on Moturoa/Rabbit Island, Rough Island and Bird Island.....	5
Figure 2:	Network of roads, tracks and trails on Moturoa/Rabbit Island and Rough Island.....	18
Figure 3:	Recreational zones on front (northern) beach of Moturoa/Rabbit Island.....	19
Figure 4:	Significant Native Habitats on the Islands.....	30
Figure 5:	General locations of Recorded Archaeological Sites on the Islands.....	38
Figure 6:	Age class distribution data for forests on Moturoa/Rabbit and Rough Islands (shows total area of forest planted on the Islands each year, for the period 1975 to 2015).....	40
Figure 7:	Consented Biosolid Application Areas on Moturoa/Rabbit Island (as at 2016).....	46
Figure 8:	1948 aerial photo of the Islands, showing extensive sand dune areas on Moturoa/ Rabbit Island. Low-lying areas of Rough Island are also visible.....	50
Figure 9:	Areas at risk of inundation at high tide by a sea level rise of one metre.....	51
Figure 10:	Relationship between Moturoa / Rabbit Island Reserve Management Plan, the Reserves Act, Council's Reserves General Policies document and operational work plans.....	62
Figure 11:	Existing recreational amenities on the Islands.....	65
Figure 12:	Tasman Resource Management Plan zones.....	76

# PART 1

## Vision & Priorities



Figure 1: Classification and location of reserve areas on Moturoa/Rabbit Island, Rough Island and Bird Island.

## Vision & Key Outcomes Sought

### VISION

- The Islands are a treasured feature of the Tasman District: a place of recreational, ecological, cultural and economic significance.
- Generations of visitors continue to experience and enjoy the low key outdoor recreation opportunities in a natural setting, free of commercial development.
- Council safeguards processes and ecosystems, preserves natural character and protects natural features and landscapes. Council works with iwi and local communities to maintain, restore and enhance the Islands' natural and cultural characteristics, and open spaces.
- The plantation forestry operation continues to make a valuable economic contribution to the region.



### KEY OUTCOMES SOUGHT

The following key outcome statements describe what the three Islands will be like 10 years or more from now. These statements will guide decisions about how Council and others will manage and use the Islands over the next 10 years.

#### Outcomes for all three Islands

The essential character of the three Islands is retained. Day-visitors enjoy the peace and tranquillity, open spaces, natural environment and the range of low key outdoor recreation opportunities on offer at this regional destination. Forestry continues to generate sustainable financial returns, benefitting the region. The cultural, social and ecological integrity of the Islands is enhanced and the unique coastal indigenous flora and fauna are sustained. An adaptive management approach is implemented in response to sea-level rise and coastal erosion, with a managed retreat of infrastructure as necessary. Kaitiaki

(guardian) obligations of iwi, to protect their taonga tuku iho (cultural heritage) and wāhi tapu (sacred places), are actively acknowledged.

#### Recreational Outcomes

Day-visitors are attracted by the wide range of passive and active outdoor recreation opportunities available on the Islands. All recreation facilities available in 2016 have been maintained and, over the next 10 years, the following new facilities provided:

- Completion of a coastal walking/cycling loop track around the western half of Moturoa/Rabbit Island.
- Creation of a Grade 2 mountain bike track in the Recreation Reserve area west of Conifer Park.
- Creation of a link track for horses along the eastern side of Ken Beck Drive, providing riders with safe access between the Rough Island events and equestrian park and the front beach of Moturoa/Rabbit Island.
- Additional information 'hubs', toilets, picnic tables, gas barbeques and shade sails are provided, in response to increasing demand.
- Plantings (within picnic areas and alongside coastal trails and Tasman's Great Taste Trail) for greater amenity, shade and shelter from the wind.



#### Environmental Outcomes

Significant Native Habitat areas (see Part 3, Section 2.2) are maintained, restored, enhanced and protected from incompatible human activities. Regular weed and pest control and revegetation enhances the integrity of these sites. The Rough Island wetland area is expanded in size by a buffer of native vegetation planted between the wetland margin and pine plantation. The lowland forest remnant at the Hunter Brown picnic area is thriving and the area covered by this ecosystem type has been expanded further east on Rough Island. The remnant coastal vegetation sequence on the south-eastern coast of Moturoa/Rabbit Island remains intact and is enhanced. Similar vegetation sequences have been replicated in other locations on the Islands coastlines, as a result of ecological restoration



initiatives. A breeding shag colony remains on the Islands, shifting to new locations over time as roosting trees die off.



Torea-pango/variable oystercatchers continue to successfully fledge chicks from nest sites on the front beach at Moturoa/Rabbit Island. More people know to avoid nests by staying on the wet sand below the high tide line during the breeding season (September to March).

Over time, the Islands' coastal margins are replanted in native species. This riparian buffer zone is at least 20 metres in width. These areas provide important refuge for species of the Waimea/Waimeha<sup>3</sup> Inlet that are vulnerable to the impacts of sea-level rise. The wetland area between Tic Toc Road and the Rough Island events and equestrian park area is returned to a more natural state.

### Cultural Outcomes

Council has developed and strengthened relationships with iwi, based on mutual good faith, cooperation and respect. Kaitiakitanga (guardianship) is reflected in the way that the Islands and their values are managed. There is an increased understanding, respect and consideration of iwi perspectives and mātauranga (knowledge) and this is incorporated into the Island's management.

The cultural and ecological integrity of the Islands is enhanced. Culturally significant ecosystems such as the harakeke/flax wetland on Moturoa/Rabbit Island provide a sustainable source of materials that are actively used for rāanga/weaving, while māhinga kai (food gathering places) sites are restored to a healthy state. Rongoā/medicinal species form part of the riparian buffer of native vegetation around the Islands' coastal margins and are sustainably harvested for rongoā use. Archaeological sites, wāhi tapu (sacred places), urupā (burial grounds) and other taonga (treasures) are actively protected from incompatible uses.

<sup>3</sup> The name Waimea was originally 'Waimeha', which means 'brackish' or 'insipid water'. This name relates to the nature of the river as it passes swamps and mudflats on its way to sea.

People can learn about the cultural association iwi have with the Islands, via accurate and appropriate cultural interpretation.

### Commercial Forestry Outcomes

Local Purpose (Plantation) Reserve areas continue to be successfully managed as a sustained yield commercial forest, where similar timber volumes are harvested each year. Forests on Moturoa/Rabbit Island and Rough Island are managed by:

- Growing trees and producing logs for the domestic and export market;
- Ensuring that the productivity of the land does not decline;
- Ensuring that environmental values are identified and maintained;
- Ensuring that cultural values, wāhi tapu and other significant sites are identified and protected;
- Ensuring that other forest values and products are identified, protected and where possible enhanced;
- Harvesting the trees as close as possible to their economic optimum age;
- Replanting following harvesting where appropriate; and
- Enabling recreation activities in areas where forestry operations are not currently underway.



## Community Survey

During the summer of 2015/2016, we asked you what you'd like to see included in a Draft Reserve Management Plan for Moturoa/Rabbit Island, Rough Island and Bird Island.

We offered a range of ways for people to get involved and tell us their thoughts and ideas about the three Islands. The options included:

- filling out a survey (either online or in hard copy);
- sending other written feedback (either via Council's online submission database, email or letter);
- taking part in the online conversation at [www.facebook.com/rabbitislandmoturoa](http://www.facebook.com/rabbitislandmoturoa);
- sending a Tweet to #LoveMoturoa; and
- booking a meeting with Council staff to discuss ideas.



We heard from over 660 individuals and groups by the end of February 2016. A total of 580 people completed the survey. Of these, 433 filled out the survey online. The remaining 147 filled out hard copies that they'd collected from one of three purple letterbox feedback stations on the Islands. Most respondents (95%) live locally in the Tasman/Nelson region.

The survey asked people what they loved about the Islands, whether they could be improved in any way and what their long-term vision was for the Islands. It also asked a range of questions about their current use of, and satisfaction with, existing facilities and opportunities available on the Islands.

One of the key findings from the survey is that people love the Islands as they currently are and want to see this essential character preserved in the future. Common ideas for a vision for the Islands included:

*"As unchanged as possible."*

*"Similar to today, with some more native plantings."*

*"For my grandchildren to be able to experience exactly what their grandparents had".*

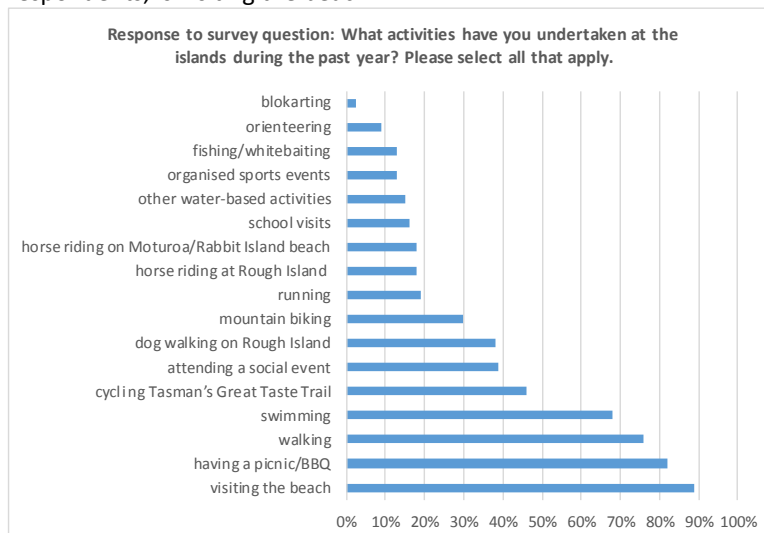
We also received many suggestions for potential improvements, most of which are generally in keeping with the existing nature of the Islands. One of the questions asked was: *"What (if anything) could Council do to improve the islands?"* A summary of responses to this question is set out in the following table.

Answer Options	Response Percent
Undertake more habitat restoration projects	40%
Remove pine trees from some coastal margins and replant with natives	40%
I like the islands just the way they are – please don't change them!	37%
Provide more toilets/change facilities	32%
Create a link track for horse riders only, between Rough Island equestrian facility and the eastern end of the front beach on Moturoa/Rabbit Island	27%
Improve signs and information	23%
Upgrade roads open to vehicle use by the public (i.e. Tic Toc Road on Rough Island, Boat Ramp Road and the network of roads within the front beach area of Moturoa/Rabbit Island)	23%
Expand the mountain bike area west of Conifer Park and include some slightly more difficult tracks	22%
Improve picnic/BBQ areas	21%

There was a strong resistance to allowing commercial activities on the Islands. In answer to the question: *"Other than the plantation forestry operation, the Islands have traditionally been kept free of all commercial activities. Would you like to see this policy continued in future?"*, 86% of respondents answered "Yes".

Survey results confirmed that locals visit the Islands for a range of recreational activities on a frequent basis, year round. Most users visit the Islands at least once every few weeks, with use peaking during the summer months.

The most popular activity, undertaken by 88% of survey respondents, is visiting the beach:



Other activities identified by survey respondents included: sunbathing, bird watching, voluntary work (trapping pests, rubbish collection and revegetation projects), kite flying, geocaching, collecting shellfish, search and rescue training.

## PART 2

### Values, Issues & Opportunities, Objectives & Policies (by Management Theme)



*Mountain bike track in Conifer Park, Moturoa/Rabbit Island.*

## Interpretation of Objectives & Policies

The objectives establish the management philosophy for the Reserve and the associated policies outline the proposed method for achieving those objectives. All decisions on future management and development of the Reserve are to be consistent with these objectives and policies.

Some of the objectives and policies apply to the entire Reserve (i.e. both Recreation Reserve and Local Purpose (Plantation) Reserve areas, on all three Islands). Others apply to specific locations or activities.

Unless this Plan specifies otherwise, each of the policies within Council's Reserves General Policies document also apply to all reserve areas on the three Islands. Where both documents contain policies on the same management theme, the policies in this Plan override those in the Reserves General Policies document.

Interpretation of the objectives and policies in this Reserve Management Plan will not deviate from the provisions of the relevant legislation.

The words **'will'**, **'should'** and **'may'** have the following meanings:

- i. Policies where legislation provides no discretion for decision making, or a deliberate decision has been made by the Council to direct decision-makers, state that a particular action or actions **'will'** be undertaken.
- ii. Policies that carry with them a strong expectation of outcome without diminishing the role of the Council and other decision-makers, state that a particular action or actions **'should'** be undertaken.
- iii. Policies intended to allow flexibility in decision-making, state that a particular action or actions **'may'** be undertaken.

### Text relating to values and issues of significance to iwi

Tiakina te Taiao<sup>4</sup> has worked with Council to prepare text relating to values and issues of significance to the four iwi represented by that organisation. This text is included within Part 2 of this Plan. Please note that these views do not necessarily reflect those held by other Te Tau Ihu iwi (i.e. Ngāti Kuia, Ngāti Toa, Ngāti Apa or Rangitāne).



<sup>4</sup> Four of the eight Te Tau Ihu iwi are members of Tiakina te Taiao: Ngāti Kōata, Ngāti Tama, Ngāti Rārua and Te Ātiawa.

## 1.0 Recreation

### 1.1 VISITOR USE & MANAGEMENT

The Islands are key recreation destinations for both locals and visitors to Tasman District.

The recreation area alongside the front (northern) beach on Moturoa/Rabbit Island is one of the most popular picnic spots in the Nelson/Tasman Region. Other drawcards of the Island include the opportunities for walking, swimming, relaxing on the beach, horse riding, cycling (including Tasman's Great Taste Trail and the mountain bike park in Conifer Park), running, orienteering, cross country, triathlons, kayaking, fishing, kite flying, blo-karting, kite surfing and other water sports.



Most recreation use takes place along the Island's front beach and within the adjacent recreation reserve area. Users are attracted by the expanse of gently sloping beach, the safe swimming, large areas of grass for picnics and barbecues, shelter from southerly winds, shade from trees and ample sunshine. The roading system guides visitors to a car parking and picnic area at the centre of the main beach. From here, people can choose to stay among the crowds or to walk along the beach to more isolated spots.

Tasman's Great Taste Trail runs across Rough Island and Moturoa/Rabbit Island alongside Ken Beck Drive to the front beach. It then continues to the Mapua Ferry landing site at the western end of Moturoa/Rabbit Island. Use of this trail by cyclists and walkers is increasing each year. During the past 20 years, some roads and trails within the forestry blocks in the western half of Moturoa/Rabbit Island have also been made available for use by cyclists and walkers. This Plan proposes some changes to this cycling/walking trail network, as discussed below.

An area at the south-eastern corner of Moturoa/Rabbit Island is used for picnicking and sunbathing by users of the

nearby water-ski lane. This area has no public vehicle access, and users either travel by boat from the boat ramp located at the end of Boat Ramp Road or from Monaco across the Waimea/Waimeha Inlet.

Rough Island is also a popular recreation destination, particularly for dog owners and horse riders. The entire island is a designated dog exercise area and is well-utilised for this purpose. The 19-hectare block of land located south of Tic Toc Road was developed as an event and equestrian area during the 1990's. This area is used for organised activities, equestrian events and is open for riders, dog walkers and the public to use informally on days when no events are planned. Other parts of Rough Island are used by cyclists, walkers and horse riders. Picnic and barbecue areas are provided in Greenslade Park and at Hunter Brown. People can launch boats into the Waimea/Waimeha Inlet from the Hunter Brown end of the island. Whitebaiting and fishing are other popular activities on Rough Island.

The Rough Island Events and Equestrian Park (Park) caters for different riding groups and individuals for the competitive and recreational rider. It has dressage and western arenas, a cross-country course, grass areas and access to riding trails through the forestry. The Park was developed to 'provide a safe, suitable and aesthetically pleasing environment in which to encourage a wide variety of equestrian activities for people of all ages' (Mission Statement 1993). It is managed by the Rough Island Equestrian Park Management Board Inc. The Park is open seven days a week for public use, and is currently home to five equestrian groups: Nelson Western Riding Club, Nelson Dressage Group, Nelson Bays Pony Club, Nelson Riding Club and Waimea Pony Club. It is also used by many more equestrian disciplines on a regular basis.





Non-commercial organised events are frequently held on Moturoa/Rabbit or Rough Islands, including social club picnics, weddings, multi-sport events, school cross country events, mountain biking days, orienteering events, Children’s Day, Moturoa Mission (an EnviroSchools initiative), Boat Club days, blo-karting races and equestrian meets. Permits are issued by the Forest Manager for some individuals and groups to make use of parts of the plantation reserve for recreation, when fire conditions allow and no operational activities are underway.

The Islands attract people from throughout the Taranaki/Nelson Region, plus visitors from further afield. Its attractions complement those of other coastal parks and reserves around Tasman Bay/Te Tai-o-Aorere, such as Tahunanui Beach, reserves at Te Mamaku/Ruby Bay and Kina beaches, Kaiteriteri beaches and Abel Tasman National Park.

## ISSUES & OPPORTUNITIES

Moturoa/Rabbit Island and Rough Island are regionally important for a range of predominantly low-impact outdoor recreational activities. Council's consistent aim over many years has been to provide low-key opportunities for seaside recreation in a natural setting, free from urban and commercial pressures. The popularity of this aim is supported by the large number of people that use the reserve.

There is scope for limited further development for low-impact recreational activities that do not require significant new infrastructure. This Plan aims to provide clear guidance on:

- (a) what recreational activities are appropriate;
- (b) where such activities are appropriate;
- (c) how the activities will be managed; and
- (d) how proposals for new activities (not anticipated by the Plan) will be dealt with.

The need for Recreation Reserve areas to continue to provide for outdoor recreation activities is recognised. This Plan also recognises the potential for conflict between

different activities – between different types of recreational activity, between recreation activities and plantation forestry operations and/or biosolid application activities, and between recreational activities and the protection/enhancement of cultural and ecological values. It includes provisions to manage such conflicts, e.g. by separation of recreational activities in space and/or time, or restricting public access to plantation reserve areas when operational activities are underway. It also recognises that some user groups require specific areas for their specialised uses.

### Front beach of Moturoa/Rabbit Island

The front beach on Moturoa/Rabbit Island is currently used for walking, running, cycling, sunbathing, swimming, fishing, horse riding, kite flying, blokartering, kite surfing and other water sports. The various uses are currently managed to avoid conflicts between users. Examples of potential conflicts between user groups include: horses may shy from kites, kite surfers or blokarters, fishing lines could trip or entangle people, people relaxing on the beach or swimming in the sea could inadvertently end up in the path of a blokarter or kitesurfer. Conflicts also occur between recreational use and other values. Any of the above activities may disturb breeding pairs of torea-pango/variable oystercatchers who nest just above the high tide mark along the front beach. Nests may be destroyed or abandoned as a result of recreational activities. This Plan proposes to continue with the current practice of zoning specific areas of the front beach for specific uses, in order to ensure any conflicts are minimised. Unauthorised motorised vehicles will also be discouraged from driving onto the beach.



### Public access to the Islands

The Islands are open to the public during daylight hours (i.e. from dawn to dusk), year round. The gates to the Islands may be closed during times of extreme fire risk, when there are high winds, and/or during storm events. The risk of fire is discussed further in Part 2, Section 5 of this Plan. Access to areas classified as Local Purpose (Plantation) Reserve on Moturoa/Rabbit and Rough Islands is generally by permit only, with some exceptions.



### Recreation activities within plantation reserve areas

A large proportion of land on Moturoa/Rabbit Island and Rough Island is classified as Local Purpose (Plantation) Reserve (see Figure 1) and managed as a working commercial plantation forest. The management objectives for these areas differ to those of Recreation Reserve areas (compare Part 2, Sections 1.1 and 4.1 of this Plan).

Public access to plantation reserve areas is discretionary. In areas of the forest where operational activities are underway (e.g. planting, harvesting, weed control, application of biosolids), there are many associated health and safety risks. Allowing unhindered public access to areas of the forest where operational activities are taking place is not appropriate. However, Council acknowledges that people enjoy using forested areas for recreational activities and considers that, in areas where operational activities are not occurring, such use may be facilitated. Council intends to adopt a more coordinated approach to management of these areas and improve communication to the public regarding recreational use of plantation reserve areas.

While a permit is usually required to access plantation reserve areas, there are some exceptions. Council has identified a network of roads and trails within the plantation reserve that will usually be available for use for specified recreational purposes (e.g. walking, running, cycling or horse riding), without the need to first obtain a permit. However, parts of this network may be temporarily closed and diversions put in place when operational activities are underway in the adjacent forestry blocks. These roads and trails are discussed in more detail below.

Roads and tracks through and around plantation reserve areas on Rough Island (including the informal track alongside the southern margin of The Traverse) are popular with dog walkers, horse riders, runners, cyclists and other recreational users. Biosolids are not applied to any land on Rough Island. Operational activity within forestry blocks has occurred with much less frequency on Rough Island

compared to Moturoa/Rabbit Island in recent years, meaning people have become accustomed to using the forestry track and road networks on Rough Island for recreational activities. This use has been considered acceptable and the Forest Manager has not enforced the 'entry by permit only' rule on Rough Island. However, some of the forestry blocks are nearing maturity and due to be harvested and replanted within the term of this Plan (e.g. the eastern-most forestry block adjoining Ken Beck Drive is due to be harvested in 2016). Restrictions on public use of these areas will be necessary when harvesting and other operational activities are underway.

On Moturoa/Rabbit Island, recreational use of plantation reserve areas falls into four main categories:

- i. cycling/walking/running on a network of roads and trails located on the western half of the Island;
- ii. horse riding/driving on the eastern half of the island;
- iii. organised game bird hunting events during three weekends each winter, on the eastern half of the Island (discussed in more detail below); and
- iv. organised events held on specific dates, at the discretion of Council (locations range across the entire Island and are dependent on the type of event being held).

Although harvesting on the Islands is generally restricted over the summer months, when recreational use peaks, application of biosolids takes place on Moturoa/Rabbit Island year round. This means that some type of operational activity is likely to be underway somewhere within the plantation reserve on this Island on any given date of the year. Council needs to balance enabling recreational use of forested areas with their legislative requirements to ensure the safety of members of the public, Council staff and contractors in areas where operational activities are underway.



Within the forestry blocks on the western half of Moturoa/Rabbit Island a network of roads and trails are available for use by cyclists and walkers, without the need to first obtain a permit. Use of these trails by recreational cyclists, walkers and runners has grown in popularity, particularly since the opening of Tasman's Great Taste Trail.

However, there have also been increasing conflicts between operational activities in these areas and recreational use. Several incidents were reported during 2015 where people were located in plantation reserve areas that were closed for public access due to operational activities. This tends to indicate that there is a lack of public awareness about the risks of entering these areas when operational activities are underway.

Horse riding/driving is permitted along the eastern end of the front beach on Moturoa/Rabbit Island, below the high tide mark – to avoid disturbance to roosting or nesting shore birds or damage to coastal dunes. People generally park their horse float in the Old Domain area of the Recreation Reserve and ride/drive through the equestrian access way (pictured below) to the beach. Others park at the Rough Island events and equestrian park and ride/drive alongside Ken Beck Drive to the beach, or they ride/drive their horses out to the Islands.

At high tide, when there isn't enough space on the beach, people ride/drive their horses along Monaco Road, which runs parallel to the front beach along the eastern half of Moturoa/Rabbit Island. Monaco Road is located within Recreation Reserve. When operational activities are underway within the adjacent forest blocks, Monaco Road will be closed to horse riders/drivers. This arrangement relies on horse riders/drivers staying on the approved routes, with access to all other areas of the plantation reserve requiring prior permission (i.e. entry via permit only).



### **Iwi issues**

Management of recreational activities is required to ensure that sensitive archaeological sites, wāhi tapu and ecologically significant sites are protected. Iwi view many development activities as a threat to the mauri of the Islands and would be hesitant to support major developments on the Islands.

### **Boat ramps**

There are two locations on the Islands where people can launch their boats into the Waimea/Waimeha Inlet. A concrete boat ramp (pictured below) is located at the end of Boat Ramp Road, in the south-eastern corner of Moturoa/Rabbit Island. A more informal boat ramp (not concreted) exists at the western tip of Rough Island. Users often drive down this access and onto the adjacent estuary to launch their boat during mid to low tide.



To meet the needs of boat owners in the District, Council may upgrade either or both of these boat ramps in future. Parking areas may be constructed, for vehicles and boat trailers. No associated buildings are proposed. Any upgrade would need to avoid any damage or destruction of ecological values, recorded or unrecorded archaeological sites or wāhi tapu (see Section 3.2).

### **Game birds**

Pheasants and Californian quail are two game bird species that thrive on the Islands. These species have traditionally been hunted elsewhere on the margins of the Waimea/Waimeha Inlet, but this activity has been displaced over time. This is due to factors such as subdivision of coastal land and increasing recreational use of the Inlet margins (e.g. cyclists and walkers using Tasman's Great Taste Trail).

This Plan enables Fish and Game New Zealand to trial organised game bird hunting events within the forestry blocks located on the eastern half of Moturoa/Rabbit Island for three weekends each winter (i.e. during the game bird hunting season). The area available for game bird hunting will exclude the area of land east of Corder Road and the coastal margin (i.e. all land between the high tide mark and 100 metres inland of this point), to protect shorebird breeding and roosting habitat.



The trial will cover a three-year period and be reviewed at the end of each season. Fish and Game will need to develop a 'Game Bird Hunting Work Plan' and have this approved by the Reserves and Facilities Manager (in consultation with the Commercial Manager and Forest Manager) before the trial can proceed.

During the trial period, authorised hunters and their dogs may be granted access to balloted forestry blocks on the eastern side of Moturoa/Rabbit Island for up to three weekends each winter (i.e. the last weekend of the months May, June and July). One hunter and one dog only may hunt each balloted block. Each hunter must obtain a separate permit to use their dog for game bird hunting on the Island, which is otherwise kept free of dogs.

In return for being granted access for this activity, game bird hunters will be encouraged to participate in ecological restoration activities on the Islands (e.g. trapping pests, weed control and planting native species along coastal margins).

The eastern end of the Island will be closed to the public during all game bird hunting events.

### Signage

Signs play a major part in establishing the image of a reserve. Sensitive design, together with careful selection of information, will increase users' enjoyment of the reserve.



There is currently a proliferation of signs of various ages on the Islands, that have been erected by Council, the Forest Manager, the biosolids contractor, Rough Island Equestrian Trust, Nelson Tasman Cycle Trails Trust, Mapua ferry operator and others. Generally, users have found the signs confusing, overwhelming, outdated and insufficient. Signage needs to be streamlined, consistent and relevant. A major review and overall reduction in the amount of signage is required, to provide improved and coordinated signage on the Islands.



Iwi wish to be involved with the development of future signage, to ensure that values of cultural significance are interpreted in an appropriate way for visitors. Iwi also encourage the implementation of poupou (carved poles) representing the historical significance of the Island. Recognition of the official dual name Moturoa/Rabbit Island should be included on all future signage installed on the Islands.

Council will construct 'visitor information hubs' at strategic locations on the Islands:

- i. near the Rough Island entrance;
- ii. a pull-over bay at the end of Ken Beck Drive (at the entrance to the front beach Recreation Reserve); and
- iii. where recreational users wait for the Mapua ferry at the western end of Moturoa/Rabbit Island.

The purpose of these 'information hubs' is to provide visitors with information about where to go, what to do and what rules or restrictions are in place on the Islands. They could be used to display maps, location of facilities and activities, provide up-to-date information on what areas are closed for health and safety reasons and explain the no-dog policy on Moturoa/Rabbit and Bird Islands. They could also explain how to report any issues and contain detailed interpretative material on the history and features of the Islands.

### Planting for amenity, shade and revegetation opportunities in Recreation Reserve areas

Picnic and barbeque areas are valued for their combination of open spaces, amenity plantings and large shade trees. Many of the mature pine trees in the front beach Recreation Reserve area are exposed to the wind, presenting a health and safety risk from falling pine cones or branches. As these trees continue to age, staged plantings of other shade trees will need to be undertaken.

Many recreation trails adjoin forestry blocks. When these blocks are harvested, the trails are left exposed to wind and sun. Shelterbelts of native species will be planted alongside

coastal trails and the inland side of Tasman’s Great Taste Trail, to offset these effects.

There are many opportunities for improving the stability, ecological value, visitor enjoyment and safety of Recreation Reserve areas by undertaking revegetation projects of various scales. Priority should be given to the establishment of low growing indigenous vegetation along the shoreline of the front beach on Moturoa/Rabbit Island, establishment of a buffer of native vegetation around the coastal margins of all three islands (a minimum of 20 metres in width), and establishment of vegetation of low flammability on boundaries with forestry blocks. Revegetation projects are discussed in more detail in Part 2, Section 2 of this Plan.

## OBJECTIVES

- 1 To use, manage and enhance all areas classified as Recreation Reserve and some areas of Local Purpose (Plantation) Reserve as natural settings for informal, outdoor recreation activities by the people of the Tasman and Nelson Regions and by visitors from further afield.
- 2 To keep the Islands free of commercial activities, other than the plantation forestry operation and specific exemptions provided by policies in Sections 1.1 and 1.2 of this Plan.
- 3 To minimise conflict between user groups by zoning and providing separate areas and facilities for specific recreational activities.
- 4 To improve communication about events and activities taking place on the Islands and provide clear, consistent, up to date signage that informs and educates visitors to the Islands.
- 5 To provide a single point of contact for all organised events held on the Islands (all applications and queries should be directed to the Reserves and Facilities team, who will liaise with the relevant Council departments and contractors).

## POLICIES<sup>5</sup>

- 1 Provide free public access to areas classified as Recreation Reserve on the three Islands from dawn to dusk year round, except when prohibited for reasons of extreme fire risk or public safety.

- a) Prior permission from Council is required to access the Islands at night. Such permission will only be given for:
  - i. infrequent organised recreational events (e.g. annual night-time orienteering events);
  - ii. major equestrian events (see Part 2, Section 1.2); and
  - iii. training exercises (see Part 2, Section 6).

2 Emphasis will be placed on the provision of passive, informal, outdoor recreation activities. Noise-creating activities will be discouraged.

3 All forms of commercial activity (including, but not limited to shops, stalls, mobile shops, recreational equipment hire, busking, concerts, entertainment or amusement facilities) will be excluded and prohibited from the Islands, with the exception of the following:

- a) commercial plantation forestry on Moturoa/Rabbit and Rough Islands;
- b) The organisers of recreational events may:
  - i. charge participants a small entry fee, on a cost-recovery basis (Council reserves the right to charge organisers a fee to hold events on a case-by-case basis); and/or
  - ii. apply to the Reserves and Facilities Manager to sell food and beverages to participants and spectators during major recreational events (where possible, non-profit groups should be engaged to sell food/beverages, in preference to commercial providers of these services); and/or
  - iii. apply to the Reserves and Facilities Manager to display portable sponsorship signs for major events, within the area the event is being held and for the duration of the event only.

4 Recreational activities on the front beach of Moturoa/Rabbit Island will be managed in accordance with the zones identified on Figure 3 and the Regional Coastal Plan. Users should be actively encouraged to utilise the zones for the purposes identified. Zones will be widely publicised (e.g. via onsite signage, websites and social media).

---

<sup>5</sup> Policies that specifically apply to the Rough Island events and equestrian park are presented in Part 2, Section 1.2.

5 A network of roads, tracks and trails will be provided for access or specific recreational activities on Moturoa/Rabbit and Rough Islands, in accordance with Figure 2 and points a) to j) below:

- a) Roads available for motorised vehicle access should be managed in accordance with Policy 6 and will be limited to the following:
  - i. Ken Beck Drive (legal road);
  - ii. Tic Toc Road on Rough Island (usually open to vehicles);
  - iii. Rough Island events and equestrian park access road;
  - iv. Boat Ramp Road on Moturoa/Rabbit Island (usually open to vehicles); and
  - v. the network of roads that provide access to picnic and barbeque areas behind the front beach on Moturoa/Rabbit Island.
- b) Roads that are usually open to walkers, runners and cyclists on Moturoa/Rabbit Island include Barnicoat Road, Mapua Road, Tawa Road, Bird Road, Higgins and Cooper Road (see also (d), (e) and (f) below).
- c) Horse riders/drivers may utilise Monaco Road (between the Old Domain and Corder Road) at high tide, although this road may be closed and/or temporary diversions put in place for health and safety reasons (i.e. when biosolid application or forestry operations are underway in the adjoining forestry blocks).
- d) Walkers, runners and cyclists may utilise Tasman's Great Taste Trail, which runs along the western side of Ken Beck Drive to the front beach and then follows Mapua Road to the Mapua Ferry pick up/drop off point at the western end of Moturoa/Rabbit Island.
- e) Walkers, runners and cyclists may utilise the coastal track located on the western half of Moturoa/Rabbit Island (see Figure 2). While much of this track network is located on Recreation Reserve, a section of Faulkner's Track that runs parallel to the southern coastline of Moturoa/Rabbit Island is on Local Purpose (Plantation) Reserve.
- f) Walkers, runners and cyclists may utilise the network of roads and tracks on the western half of Moturoa/Rabbit Island (see Figure 2), although sections may be closed and/or

temporary diversions put in place for health and safety reasons when forestry operations are underway in the adjoining forestry blocks.

- g) An existing Grade 1 mountain bike trail is established in the Conifer Park area adjacent to the front beach on Moturoa/Rabbit Island. A new Grade 2 mountain bike trail will be developed in the Recreation Reserve area located immediately west of Conifer Park. The area will also continue to be managed for commercial plantation forestry purposes for one more rotation.
- h) All Recreation Reserve areas adjoining the front beach on Moturoa/Rabbit Island, including the mountain bike park areas, will be kept free of biosolids at all times.
- i) Horse riders/drivers may ride between the Rough Island events and equestrian park and the front beach at Moturoa/Rabbit Island via a purpose-built link track along the eastern side of Ken Beck Drive<sup>6</sup>. The link track will be for horses only (i.e. no walkers, cyclists or other recreational users).
- j) A permit is required to access any of the other roads, tracks or trails located within Local Purpose (Plantation) Reserve areas on the Islands (i.e. those not specified under (a) to (i) above).

6 Layout and management of roads that are open for members of the public to drive motorised vehicles on (see Policy 5(a) above) should comply with the following guidelines:

- a) Roads should be designed to establish an orderly flow of traffic travelling at slow speeds.
- b) One-way roads may be upgraded to two-way roads, where practicable.
- c) Through traffic should generally be routed away from picnic areas.
- d) Roads should be moved inland, away from coastlines, in response to coastal erosion or sea level rise (see Part 2, Section 5).
- e) 'Horses' road signs should be installed either side of the causeway between Rough and Moturoa/Rabbit Islands and at designated

---

<sup>6</sup> Note that Tasman's Great Taste Trail runs along the western side of Ken Beck Drive.

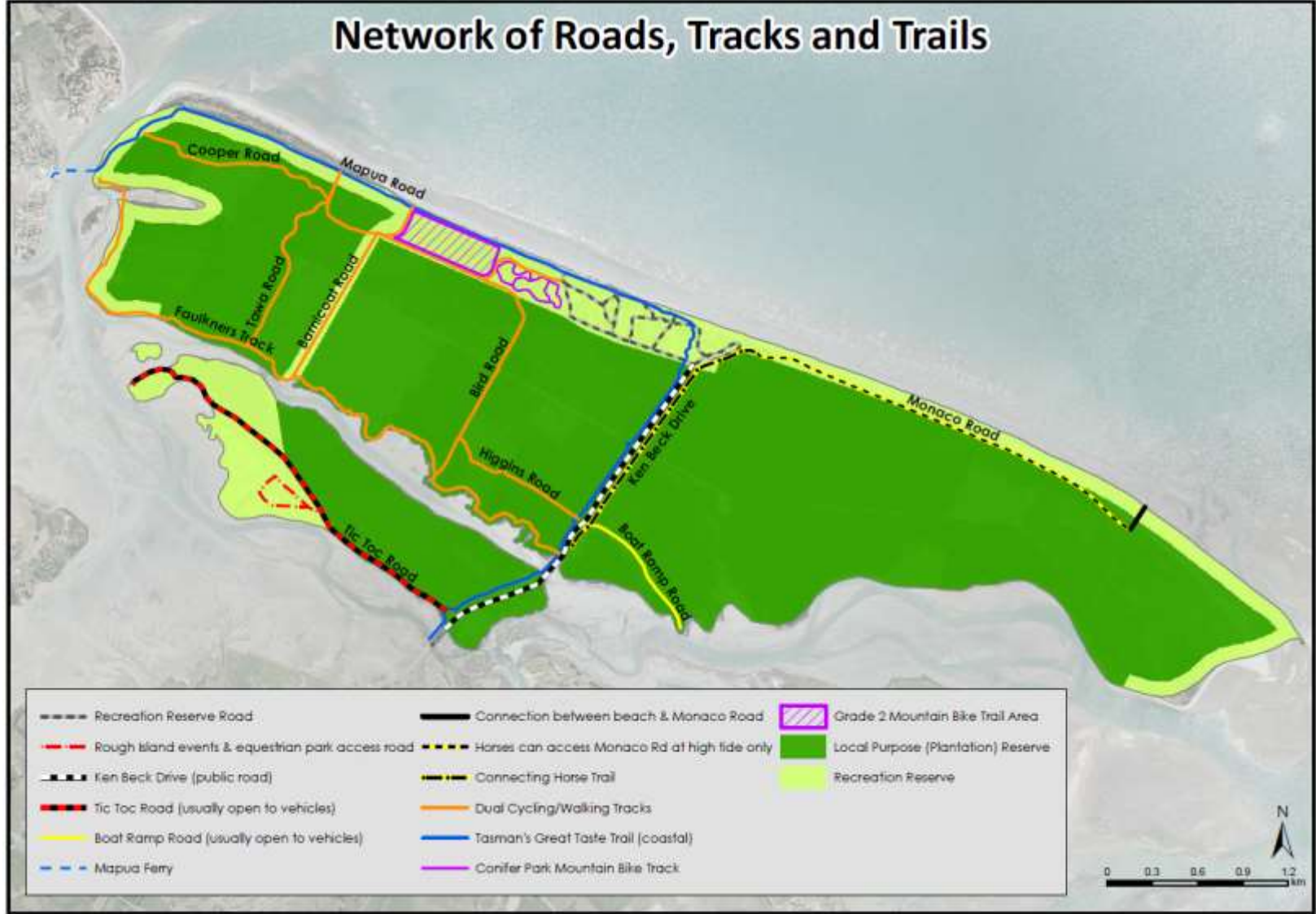


Figure 2: Network of roads, tracks and trails usually available for recreational use on Moturoa/Rabbit Island and Rough Island

## Recreational Zones on Front Beach

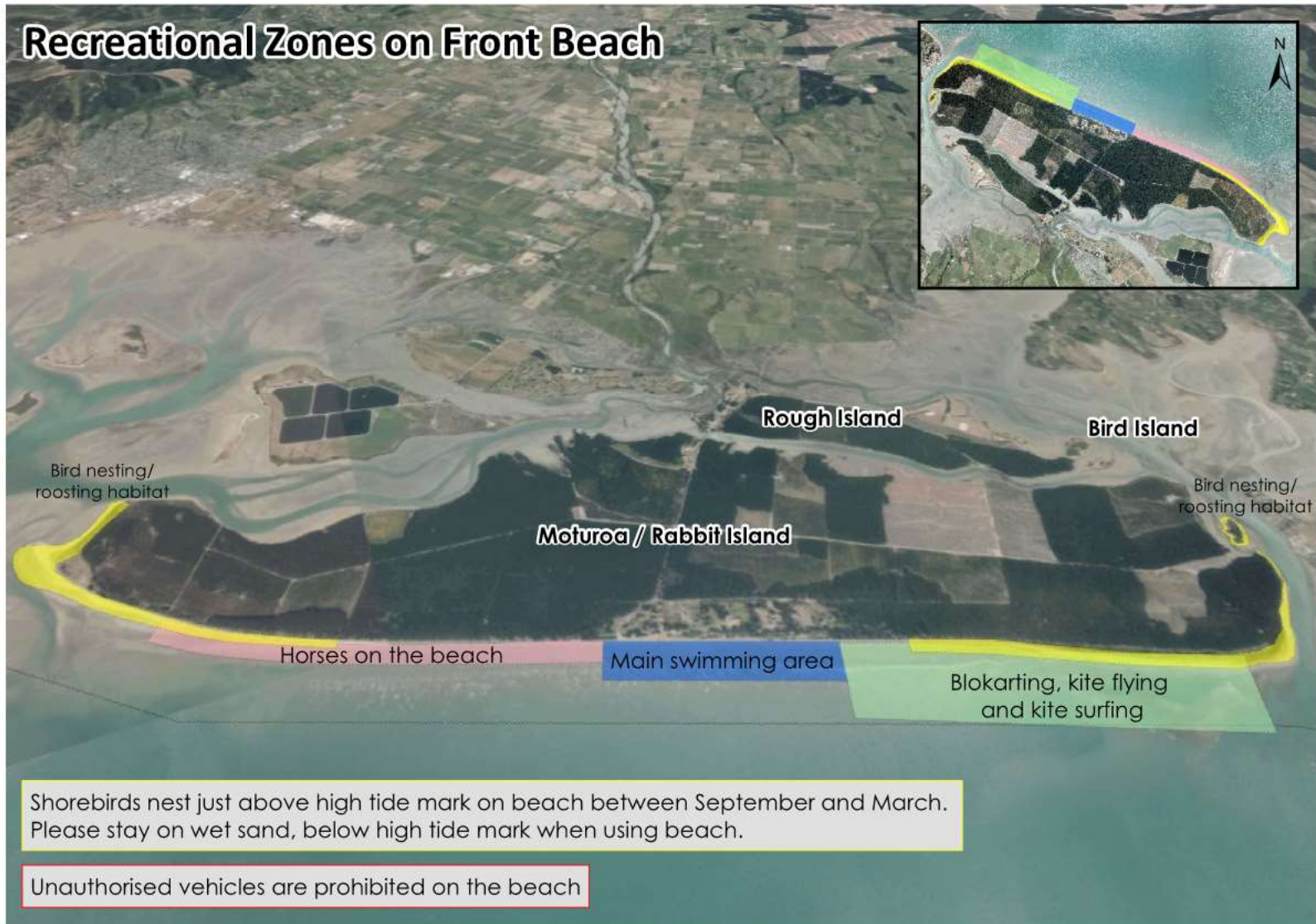


Figure 3: Recreational zones on front (northern) beach of Moturoa/Rabbit Island

crossing points on Ken Beck Drive, to alert motorists of the need to reduce their speed when passing horse riders.

- f) Vehicle speed limits on Ken Beck Drive may be reviewed via the Speed Limit Bylaw review process, on an as required basis.

7 Unauthorised motor vehicles will be prohibited from entering the estuary, shoreline dunes, beach, archaeological sites, tracks/trails and areas of native vegetation.

8 Subject to successfully obtaining the required resource consents, either or both of the existing boat ramps may be upgraded and an associated parking area provided in a location where ecological values, māhinga kai areas (including shellfish beds), recorded and unrecorded archaeological sites and wāhi tapu will not be disturbed, damaged or destroyed by the activity (see also Part 2, Section 3.2).

9 Other than as exempted by Policy 4(g) (Part 2, Section 1.2 of this Plan), overnight staying is prohibited on the Islands. This includes staying overnight in tents, cars, campervans, caravans, motor homes and any other type of temporary accommodation.

10 Dogs are only permitted on Rough Island, which is designated under Council's Dog Control Bylaw as a 'controlled dog exercise area' (i.e. a place where dogs can be exercised off their leash). Council will continue to prohibit dogs from being taken on to Moturoa/Rabbit Island and Bird Island, even in vehicles, in accordance with the Dog Control Bylaw<sup>7</sup>.

11 Organised social gatherings or low impact sporting events may be allowed on the Islands, subject to prior permission being obtained from the Reserves and Facilities Manager.

12 On land classified as Recreation Reserve, buildings and facilities will be limited to the minimum required for the informal recreation use and will be located and designed to an appropriate architectural standard and with due regard to ecological values, recorded and unrecorded archaeological sites, wāhi tapu and the risk of coastal erosion (see also Part 2, Section 3.2). These

buildings and facilities may include caretakers' houses, changing sheds, maintenance buildings, toilets, picnic facilities, shade structures, fireplaces, rubbish bins, roads, parking areas, vehicle barriers and boat launching ramps. Buildings and facilities that cater for the use or management of the plantation forestry will not be permitted on areas classified as Recreation Reserve.

13 Additional toilets should be provided in strategic locations, as required. With the increase in numbers of visitors using Tasman's Great Taste Trail, toilets should be provided near the entrance to Rough Island and near the Mapua Ferry departure point at the western end of Moturoa/Rabbit Island. Given the cultural significance of the latter site, consultation with iwi will be required, to determine an acceptable location for a containment toilet.

14 Picnic and barbecue areas will be located and designed to provide visitors with a choice ranging from large, open areas suitable for large groups, to intimate, lightly used areas with limited vehicle access.

15 Fires will be permitted only in the permanent semi-enclosed fireplaces in picnic areas and will be subject to fire restrictions as required.

16 Fireworks are not permitted anywhere on the Islands.

17 Vegetation (preferably native species) will be planted to provide enclosure of picnic areas, shade, wind shelter (including alongside coastal trails and Tasman's Great Taste Trail), mitigation of erosion, establishment of sand dunes, wildlife habitat, fire control and visual screening. Rongoā/medicinal plant species may be sustainably harvested for rongoā purposes.

18 Existing trees within the Recreation Reserve areas may be removed if they are unsafe or contribute to coastal erosion.

19 A comprehensive review of all signage displayed on the Islands will be undertaken.

20 All relevant signage will be updated to include the official name Moturoa/Rabbit Island.

<sup>7</sup> Moturoa/Rabbit Island (including the beach) is designated as a 'dog prohibited area' – i.e. no dogs are permitted anywhere on the Island or beach. However, Council may occasionally authorise (i.e. issue permits for) the use of dogs on Moturoa/ Rabbit Island for police dog training purposes, pest eradication purposes (e.g. pig hunting) or game bird

hunting purposes. Further information about Council's Dog Control Bylaw and dog exercise areas is available online at: [www.tasman.govt.nz/services/animal-control/dog-control/exercising-your-dog/](http://www.tasman.govt.nz/services/animal-control/dog-control/exercising-your-dog/)

- 21 A coordinated system of signs and interpretative material, which promotes the orderly use of the Islands and combines the provision of useful information with the listing of restrictions, should be set up and maintained.
- 22 One or more 'visitor information hubs' should be provided on the Islands, where visitors can access information about where to go, what to do and what rules or restrictions are in place. Key locations for 'information hubs' include:
- near the entrance to Rough Island;
  - a pull-over bay at the end of Ken Beck Drive (at the entrance to the front beach Recreation Reserve); and
  - the Mapua ferry landing area at the western end of Moturoa/Rabbit Island.
- 23 A range of initiatives should be implemented to improve communication about events and activities taking place on the Islands. For example:
- a) improve the coordination and communication of operational activities undertaken by the Council, Forest Manager, Nelson Regional Sewerage Business Unit (NRSBU) and biosolids contractor;
  - b) provide and regularly update a dedicated website for the Islands, which includes an online calendar of upcoming events and operational activities; and
  - c) increase use of social media to publicise events and activities.
- 24 Organised game bird hunting events may be held at the eastern end of Moturoa/Rabbit Island for three weekends each winter (i.e. during the last weekend of each of the months of May, June and July), subject to the following conditions:
- a) The events will be organised by Fish and Game New Zealand and managed in accordance with the 'Game Bird Hunting Work Plan'. This Work Plan is to be developed by Fish and Game and submitted to the Reserves and Facilities Manager for approval. No game bird hunting may take place until this Work Plan has been approved.
  - b) The forest area on the eastern half of Moturoa/Rabbit Island may be divided into blocks and a hunting ballot organised to hunt pheasants and/or Californian quail during the game bird hunting events. To protect sensitive shorebirds, hunting will not be permitted in the area east of Corder Road, south of Boat Ramp Road or within a 100 metre wide coastal buffer zone (i.e. no hunting between the high tide mark and 100 metres inland from this point). A 100 metre 'no hunting' buffer zone will also apply alongside Ken Beck Drive and along the northern side of Boat Ramp Road. Additionally, no hunting should take place within any forest blocks that are closed due to recent application of biosolids.
- 25 Game bird hunting on the Islands may only take place in accordance with Policy 24 above (i.e. hunters must participate in an organised event on specified weekends, on the eastern half of Moturoa/Rabbit Island).
- 26 Participants of recreational events on the Islands, including but not limited to game bird hunting events, should be encouraged to contribute to ecological restoration projects on the Islands (e.g. trapping animal pests, weed control, native plantings etc).
- c) For public safety, the eastern end of the Island will be closed to public access during the three winter weekends when game bird hunting events are being held.
- d) Authorised game bird hunting dogs may be used during the hunting events (one dog per balloted hunting block), in accordance with the Game Bird Hunting Work Plan. Strict controls will apply to the authorisation and use of hunting dogs on Moturoa/Rabbit Island and these will be specified in detail in the Game Bird Hunting Work Plan.
- e) Game bird hunting events will initially be held on a trial basis, for a period of up to three years. During the trial period, the activity will be regularly monitored and reviewed and decisions made by Council as to whether to continue or discontinue with the trial. If at any time monitoring shows that the effects of the activity are unacceptable, then:
- i. further restrictions may be placed on the activity in order to manage these adverse effects; or
  - ii. the activity may be discontinued at any stage of the trial.
- If, at the conclusion of the three-year trial period, Council determines the trial to be a success, game bird hunting events may continue to be held for the remainder of the term of this Reserve Management Plan.

## 1.2 ROUGH ISLAND EVENTS & EQUESTRIAN PARK

The 19 ha Rough Island Events and Equestrian Park ('the Park') may be used for equestrian activities and events, and for other organised outdoor recreation events, provided that the following objective and policies are observed. The Park is not intended to be used exclusively for equestrian activities and events only.



The Park forms part of the Rough Island dog exercise area. If there are no specific events underway, people are welcome to exercise their dogs in this area. However, owners are responsible for ensuring their dogs are under control at all times and keeping them at a safe distance from horses. Mutual respect is required between dog walkers and horse riders, to avoid conflicts between the two activities.

### OBJECTIVES

- 1 To allow the use of the Rough Island Events and Equestrian Park ('the Park') for a range of outdoor activities and events, subject to Council approval.

### POLICIES

- 1 The Park should be used only for outdoor activities and events, including (but not limited to) dog exercise and equestrian activities and events.
- 2 Members of the public should be permitted to use the Park, except at times when informal public use would disrupt specific events.
- 3 Dogs are permitted in the Park for exercise purposes, except at times when this would disrupt specific events.
- 4 Applications to hold major organised events and activities associated with such events (such as the provision of food and beverages, amplified sound, entry charges, overnight security, and portable

sponsorship signs) will be considered by Council on a case-by-case basis, in accordance with the following:

- a) Sale of food and beverages will only be permitted during approved events. Where possible, non-profit groups should be engaged to sell food/beverages, in preference to commercial providers of these services.
  - b) A bond may be required to be paid to the Council.
  - c) Appropriate insurance for the event, including public liability and fire, must be carried by the organiser.
  - d) The area may be closed to the public and an entry fee charged by an organisation staging a special event (Council reserves the right to charge organisers a fee to hold events on a case-by-case basis). Notice of such a closure must appear in a local weekly newspaper that is distributed free to households, one week in advance of the event. All costs of notification are to be met by the organiser.
  - e) Portable sponsorship signs may be erected for the duration of the event only.
  - f) Amplified sound at events shall be directed to the north, i.e. away from the Waimea/Waimeha Inlet.
  - g) Staying overnight on the area will be permitted for security purposes only, and using a minimum number of people.
  - h) Additional portable toilets, rubbish bins etc may be required to be provided by the event organiser, for large events.
  - i) Alternative parking areas may be required.
- 5 Applications must be forwarded to the Reserves and Facilities Manager at least three months prior to an event. Permits may be issued for approved events and activities associated with these events. Conditions may be placed on the permit.
  - 6 A schedule of major equestrian events is to be prepared each year by the Rough Island Equestrian Park Management Board Inc, provided to Council's Reserves and Facilities Manager and displayed on



the website maintained by the Board<sup>8</sup>. The Board is responsible for coordinating all equestrian events.

- 7 The event organiser is responsible for the removal of all rubbish and any temporary structures from the site.
- 8 The event organiser will comply with Council's operating rules for events held at the Park between October and May. These rules relate to management of fire risk and include the need to cancel events and close the Park to safeguard forested areas of Rough Island during times of extreme fire risk.
- 9 All organised events will be held only during daylight hours, when the Rough Island security gates are open.
- 10 No activities are permitted during the hours of darkness.
- 11 The number and size of signs in the Park will be minimised. Sign design will comply with the design guide included in the Communication Work Plan (see Part 2, Section 7). Prior approval from Council's Reserves and Facilities Manager and (if applicable) resource consent will be required for all signs. Permanent advertising signs will be prohibited.
- 12 Open fires in the Park are prohibited at all times.
- 13 The Rough Island Equestrian Park Management Board Inc will be responsible for ensuring that the Park (including all plantings, buildings and facilities) is maintained in a tidy condition, to Council's satisfaction, at all times.
- 14 Buildings or facilities that may be erected, subject to prior written consent from the Community Development Committee of Council and the appropriate resource and building consents, include:
  - a) public toilets;
  - b) fences;
  - c) yards for horses;
  - d) picnic facilities and associated shade structures;
  - e) temporary outdoor stages;
  - f) roads; and
  - g) parking areas.

The relevant policies from Chapter 6 'Development of New Features and Facilities' in Council's Reserves General Policies document also apply.

- 15 Other than the buildings and facilities provided for in Policy 14 above, no further large structures or administration or storage buildings will be permitted to be built in the Park.



---

<sup>8</sup> As at 2016, the Rough Island Equestrian Park Management Board's website address is: <http://roughislandequestrianpark.webs.com/>

## 2.0 Environment

### 2.1 OVERVIEW OF ECOLOGICAL VALUES

This section provides an overview of the ecological values of Moturoa/Rabbit, Rough and Bird Islands, which are in the Motueka Ecological District. The values of each of the six areas identified as 'Significant Native Habitats' (see Figure 4) under the Native Habitats Tasman programme are outlined in Section 2.2.

Tasman District has eight coastal areas that are of international importance for resident and/or migratory shorebirds<sup>9</sup> - meeting selection criteria under the Ramsar Convention on the Conservation of Wetlands, to which New Zealand is a Party. The eastern end of Moturoa/Rabbit Island is included within these eight coastal areas. The Islands lie within (and help define) the Waimea/Waimeha Inlet, which is the largest barrier enclosed Inlet in the South Island and recognised as an 'Area with Nationally Important Natural Ecosystem Values'. The Waimea/Waimeha Inlet is also considered to be of international importance for torea-pango/variable oystercatcher, torea/South Island pied oystercatcher and ngutuparore/wrybill; of national importance for kuaka/bar-tailed godwit and hauhou/red knot; and a site of significance for breeding torea-pango/variable oystercatcher (with 6-10 pairs recorded).

Prior to human modification, grasses such as spinifex and pingao covered the dunes located within the northern part of Moturoa/Rabbit Island, while lowland tōtara forest covered the more stable southern part. Coastal margins had vegetation sequences grading from eelgrass and saline turf into rushes, sedges, harakeke/flax and shrubs (mainly saltmarsh ribbonwood, mingimingi and manuka), and finally into forest. Common coastal forest species would have included ngaio, ti kouka/cabbage tree, kowhai and tōtara. Kahikatea, harakeke/flax, purei/tussock sedge (*Carex secta*), rautahi/sedge (*Carex geminata*) and raupo would likely have been present in freshwater wetlands.

Most of the natural terrestrial ecosystems have been lost from the Islands. What remains is mostly in small fragments of forest and freshwater wetland. The estuaries are mostly intact, although their fringing vegetation sequences have largely gone. Small areas of native vegetation include Bird Island, the Hunter Brown picnic area on Rough Island, a wetland on Rough Island, a coastal vegetation sequence on Moturoa/Rabbit Island and a small harakeke/flax wetland on Moturoa/Rabbit Island.



The natural character of the Islands has been considerably modified by human activities, including the replacement of almost all natural vegetation with *Pinus radiata* and marram grass, interference to the natural landform by logging and introduction of plants and animal pests. The Traverse waterway (a narrow estuarine channel between Moturoa/Rabbit and Rough Island) was modified by the construction of two causeways at either end during the 1960's. As a result, the Traverse suffered extensive sedimentation effects, reduction in water quality due to severely constrained tidal interchange, and reduction in amenity values, ecological values and natural character values. Although the western causeway was removed in the mid 1990's, the resource consent obtained to remove the eastern causeway has now expired. The remaining causeway (which forms part of Ken Beck Drive) continues to restrict natural tidal flow and sediment movement along the Traverse. Biosolids are pumped across from the Bell Island Sewage Treatment Plant and applied to forest plantation areas on Moturoa/Rabbit Island, altering the natural soil structure and nutrient content.

Much of the land on Moturoa/Rabbit Island and Rough Island is now covered with *Pinus radiata*, with an understorey of grass, broom and pampas, plus some understorey regrowth of ti kouka/cabbage trees, kohuhu, mingimingi and broad-leaved shrubs. Many other species have been planted, particularly on the beach front, but survival rates are low.

Several bird species that were once abundant in the area are now threatened or at risk, including torea-pango/variable oystercatcher and other shore bird species (see Appendix 5). A stand of mature pine trees near the eastern coast of Rough Island provides habitat for a

<sup>9</sup> Schuckard R. & Melville D.S. (2013). *Shorebirds of Farewell Spit, Golden Bay and Tasman Bay*. Prepared for Nelson City Council and Tasman District Council.

breeding shag colony. One species that manages to co-exist with plantation forestry activities is the breeding colony of black backed gulls, which nest in recently logged areas in the north-western part of Moturoa/Rabbit Island. Several introduced gamebird species also live within the forested areas of Moturoa/Rabbit Island, including pheasants and Californian quails.

The Traverse (tidal waterway located between Moturoa/Rabbit Island and Rough Island) provides habitat for water fowl and wading birds. As recently as 30 years ago, banded rail, marsh crane and bittern were sighted in the Traverse. Rare sponge gardens also exist here. The waterway is not part of the Reserve, being below mean high water level. However, its narrow width and the restrictions on tidal flows – created by the causeway at the eastern end of the channel – make it largely dependent on the Reserve.



Inanga/whitebait spawn along the riverbanks above normal water levels during autumn King Tides. Most streams and rivers that flow into the Waimea/Waimeha Inlet hold spawning habitat on their banks that are used by inanga.

## ISSUES & OPPORTUNITIES

### Destruction of Māhinga Kai

Māhinga kai resources of the Islands and surrounding areas are compromised by pollution, development and other activities. For iwi, this diminishes the mauri of the environment and the ability of iwi to practice mānaakitanga, through traditional harvesting of kai species. This issue is explained in more detail in Part 2, Section 3 of this Plan.

### Protection of ecosystems and biodiversity “Ngā taonga tuku iho”

A priority for iwi and Council is to maintain the ecological integrity of the Islands and surrounding estuarine ecosystems, wetlands, tōtara and native flora stands, indigenous flora and fauna species and nesting sites.

Modification and development has had negative impacts on the ecological integrity of the Islands.

Iwi have a kaitiaki obligation for the management of natural resources ‘ngā taonga tuku iho’ of Moturoa/Rabbit Island, which is reflected in the numerous occupation sites on the Islands and along the coastline adjacent to the Waimea/Waimeha Inlet. Past coastal development and activities in and around land and water resources have led to degradation, damage and destruction of wāhi tapu, cultural heritage and sites of significance to iwi.

### Habitat restoration opportunities

The potential exists for creation, maintenance and enhancement of indigenous habitats on the Islands. Restoration of the Islands’ coastal margins has inherent biodiversity value and would also provide ecosystem services. A buffer of indigenous vegetation could be formed between the plantation forest and the shoreline (on Moturoa/Rabbit Island, much of the coastal margin is classified as Recreation Reserve – see Figure 1). This vegetated buffer would improve the aesthetic values of the Islands and assist with the filtering of post-harvest sediment runoff, compared with the hard edges that are present now.

The conditions of the resource consent for the Waimea Community Dam: Indigenous vegetation and indigenous forest removal (RC140543) include a biodiversity compensation requirement for “*not less than 10 hectares of coastal duneland forest/wetland/estuarine margin restoration (mostly revegetation) on Rough and/or Moturoa/Rabbit Island*” (see condition 49 of the consent). Areas chosen for restoration should be protected for this purpose, which is likely to involve a reserve status change (see Part 2, Section 8).

The Department of Conservation (DOC) has identified the Waimea/Waimeha Inlet as a priority ‘Ecosystem (or Biodiversity) Management Unit’ and is currently developing specific conservation targets, objectives and management actions for the different ecosystem types present (broadly categorised as ‘Inlet’, ‘Margins’, ‘Islets’ and ‘Waterways’). A number of restoration projects are already being undertaken by members of the Waimea Inlet Forum, with support from Council and DOC. A restoration resource kit<sup>10</sup> has recently been produced by DOC to guide landowners, communities and others through the steps required to correctly restore estuarine, riparian, wetland and terrestrial coastal sites in the Waimea/Waimeha Inlet.

<sup>10</sup> The restoration resource kit is available online at: <http://www.doc.govt.nz/our-work/waimea-inlet-restoration-project/>

## Restoration opportunities for coastal margins and intertidal habitats

Less than 0.25% of the original native terrestrial forest remains within 700 metres of the Waimea/Waimeha Inlet. There are only nine remnant sites, covering a total area of under 10 hectares. While a greater area of wetland and scrub vegetation remains, this is also a fraction of its former extent. Ninety percent of estuary saltmarsh has been lost and only 227 hectares of indigenous estuarine vegetation remains in the 3455 hectares of the Inlet. Most estuarine or semi-terrestrial wetland habitats were in the upper intertidal zone, especially near stream mouths. Those that remain are important habitat for freshwater fish, birds, and invertebrates.

The Islands margins would benefit from having the native coastal vegetation protected, where it still exists, or restored. This would provide wildlife corridors between remnant habitats. Despite the inclusion of a policy in previous versions of the reserve management plan for the Islands, requiring the protection and restoration of shoreline vegetation, very little restoration has been undertaken to date. Restoration needs long-term commitment, relevant knowledge, and hands-on attention, in the choice, placement and care of plants. A Habitat Protection and Restoration Work Plan should be prepared for the Islands and implemented over a period of years (see Part 2, Section 7.0). Restoration of the Islands' coastal margins should be carried out progressively, as opportunities arise (e.g. following harvesting).



The shoreline profiles around the Reserve vary; some are distinct banks a metre or more high, while in other places the shoreline is a gentle gradation from the intertidal area to dry land. The effects of the predicted sea level rise (see Part 2, Section 5) on existing and proposed shoreline vegetation will therefore vary from location to location. A prediction of how the shoreline vegetation will be affected by sea level rise should be a key consideration in the design of the Habitat Protection and Restoration Work Plan, along with a work programme that provides for managed migration of vegetation associations inland. This is important, if funding and effort for habitat restoration is to be successful in the face of future sea level rise.

There is a need to identify, protect and restore key areas of estuary saltmarsh in the upper intertidal zone around the Islands' shores (e.g. the Traverse, the Tic Toc and areas around Bird Island). Two potentially significant fingers of saltmarsh/sandflat have been damaged by the construction of shoreline roads on causeways that isolate them from the rest of the Waimea/Waimeha Inlet. Natural tidal influence could be restored to these fingers by removing the causeways that block the tidal flow. One finger runs about 500 metres eastwards, immediately east of Bullivant Island. This area has been infilled and used to grow pines on Moturoa/Rabbit Island. The other is the low-lying area on Rough Island located between Tic Toc Road and the Equestrian Park, where tidal flow restrictions have changed the landform from an intertidal sand flat to an area now dominated by exotic grasses.

There are opportunities elsewhere, for instance along the shores of the Traverse, to remove shoreline roads and re-open formerly intertidal areas to tidal influence. This would assist shoreline vegetation to migrate in response to sea level rise and should be investigated as one of the actions in the preparation of the Habitat Protection and Restoration Work Plan. A large area of saltmarsh has self-established in the Traverse following removal of the western causeway. This area would benefit from the removal of pine trees and more compatible native plantings along the upper edges.

The Habitat Protection and Restoration Work Plan should specify how intertidal margins will be restored and managed so as to provide for the vegetation sequence to migrate inland under the influence of the rising sea level. Action should also be undertaken to prevent saltmarsh and intertidal areas from being damaged by off-road vehicles and motorcycles, for instance between Hunter Brown and Bird Island.

### Bird disturbance, predation and loss of habitat

The Islands' coastlines, wetlands and the open intertidal areas are important habitat for bird species. Birds can be disturbed by people, dogs, vehicles, boats, and activities such as duck-shooting. Reduced area or loss of particular habitat types can affect breeding, feeding and roosting. Migratory bird species are particularly at risk from disturbance, which may leave them undernourished for their migratory flights. Re-establishing wildlife corridors that connect habitat areas would benefit some species. Shoreline and wetland birds are vulnerable to predators, especially when nesting. Trapping predators by community volunteers and landowners needs on-going support.

Rough Island is planned to continue as a dog exercise area, meaning that bird habitat there will be limited. For that reason, it is important that Moturoa/Rabbit Island remains

free of dogs<sup>11</sup> and is managed to increase the diversity of bird habitat. Areas that have existing value as, or potential for, bird feeding, roosting and nesting should be protected and enhanced, especially for threatened and at risk species. Recreational activities, including walking and picnicking, should be discouraged in bird sensitive zones, including the main nesting/resting areas at the western and eastern ends of Moturoa/Rabbit Island. These areas are increasingly being disturbed by people using the beach and coastline for recreational activities.

Coastal erosion and increased disturbance from more people walking on the beach (particularly cyclists and walkers using Tasman's Great Taste Trail and Mapua Ferry) have significantly impacted (negatively) on the breeding success of torea-pango/variable oystercatchers in the western part of Moturoa/Rabbit Island.

Recreation activities in the eastern half of Moturoa/Rabbit Island should continue to be limited to horse riding on the wet sand below the high tide mark or along Monaco Road. Encouraging other recreational activities at the eastern end of the island would result in unacceptable levels of disturbance to nesting and roosting birds. Although dogs are prohibited on Moturoa/Rabbit Island, people sometimes boat across the inlet from Monaco to the eastern end of the island, bringing their dogs with them. This behaviour is difficult to control and manage, as few other people visit this part of the island on a regular basis.



### **Risk of bird-strike at Nelson Airport**

Airport operations highlight a complex relationship between aircraft safety requirements, bird behaviour, and activities that affect bird behaviour on, over, or near the airport. Any changes or enhancement made to bird habitat should endeavour to avoid or reduce the risk of bird-strike to aircraft.

<sup>11</sup> Exceptions to the 'no dog' policy on Moturoa/Rabbit Island may be made (a) where use of dogs is required for pest eradication purposes (e.g. pig hunting) or (b) for police dog training purposes.

The high tide shorebird roost at the eastern end of Moturoa/Rabbit Island is important in terms of reducing potential bird strike hazard at Nelson Airport. The birds using this site roost in a variety of locations, including the Bell Island shellbank, Sand Island, Moturoa/Rabbit Island and Nelson airfield. Their choice of roosting site depends on a range of factors, including tide height and disturbance from human activities. Any increase in disturbance at the east end of Moturoa/Rabbit Island potentially increases the bird strike risk at Nelson Airport. Restricting access to roosting sites at the eastern end will allow birds to rest undisturbed, resulting in fewer mass take-offs that could potentially affect air traffic. This is another reason why the eastern end of Moturoa/Rabbit Island should not be opened up to additional recreational activities.

### **Weed and pest control**

Exotic pest species may potentially displace native species, change ecosystem functioning and reduce amenity value. A formal weed and pest monitoring and control/eradication programme is required, which evaluates the risks and sets priorities for implementation, based on key biodiversity values at each site. This programme could form part of the Habitat Protection and Restoration Work Plan. Implementation should be adequately funded and accompanied by on-going pest monitoring, so that progress is recorded and potential issues are identified early.

### **Recreational use, public access and protection of ecological values**

While Part 2, Section 1.1 of this Plan encourages a wide range of outdoor recreation activities, these activities should not compromise the natural values of the Islands. For example, motorised activities, such as beach bike racing, power boating, water skiing and hovercraft, can result in disturbance to nesting and/or roosting shore birds.

Improving the nature, location and extent of physical and legal access to and around the Islands must also consider the implications on habitat conditions for birds and effects on scarce remnant indigenous vegetation. This Plan generally provides for unrestricted public foot access to as much of the Islands' shorelines as practical, without compromising fauna and flora habitat values. Areas such as the eastern end of Moturoa/Rabbit Island will remain as undisturbed areas where native flora and fauna can flourish. Hence public access to this location is discouraged.

Restricted and controlled areas must be mapped, signposted and monitored for compliance (and included in the Habitat Protection and Restoration Work Plan). Some

restrictions may only be seasonal to appropriately protect natural values, such as shore bird nesting. Simple signage that describes why people should stay away from some areas would be helpful. Recreational tracks and trails should be located a suitable distance from the shoreline, to avoid bird nesting and roosting areas on the upper part of the beach.

## OBJECTIVES

- 1 To enhance and maintain māhinga kai areas for overall ecosystem health and cultural integrity.
- 2 To protect 'Significant Native Habitats' (see Part 2, Section 2.2) and other existing natural features.
- 3 To extend and restore habitat for indigenous species.
- 4 To restore (or facilitate regeneration of) natural coastal margins on all three Islands over time.

## POLICIES

- 1 Actively protect and manage each of the six 'Significant Native Habitat' sites in accordance with the relevant policies specified in Part 2, Sections 2.1 and 2.2. of this Plan.
- 2 Council should initiate a process to change the reserve classification of each of the six 'Significant Native Habitat' sites to Scenic Reserve, to provide appropriate protection for the significant ecological values of these sites. A separate public consultation process is required to change reserve classification (see Part 2, Section 8 of this Plan).
- 3 Implement an ongoing programme of habitat restoration, including integrated weed and pest management and fire protection.
- 4 'Significant Native Habitat' areas and other areas containing vegetation remnants should be valued as seed sources.
- 5 Plants used in restoration or revegetation projects should be appropriate to the locality and eco-sourced wherever possible.
- 6 Progressively create a buffer of indigenous vegetation along the Islands' coastal margins. Priority should be given to locations with existing habitat remnants and areas of coastline alongside existing recreational tracks.
- 7 Recognise and provide for the effects of sea level rise and climate change, particularly in relation to

native species whose habitat is the Inlet margin, where sea level rise projections show that extensive inland migration will be required over the next few decades.

- 8 Progressively identify, protect and restore key areas of estuary saltmarsh in the upper intertidal zone around the Islands' shores (e.g. the Traverse, the Tic Toc and areas around Bird Island).

- 9 Progressively return the Traverse and its shores to a character similar to that which would have existed before the plantation was established. This should include:

- a) Keeping all plantation trees at least 20 metres back from the high tide mark and planting native vegetation to emulate a natural succession from the tidal flats to the edge of the plantation.

- b) Increasing public appreciation of the waterway by creating and maintaining public access tracks parallel to the northern and southern shorelines. The northern track (Faulkner's Track) is a dual walkway/cycleway, forming part of the loop around the western half of Moturoa/Rabbit Island. The southern track may be used by walkers and horse riders on Rough Island.

- 10 Actively discourage people from driving vehicles onto the Inlet and its margins, by forming and maintaining physical barriers and installing signage beside access points, such as boat ramps.

- 11 Continue to implement the 'no dog' policy on Moturoa/Rabbit Island and Bird Island. Install signage advising of this policy in key locations and include information on how to report breaches. Follow up with timely enforcement measures, when breaches occur.

- 12 In the event that the Waimea Community Dam is constructed, under the current resource consent at least 10 ha of coastal duneland forest/wetland/estuarine margin restoration will need to be undertaken on Rough and/or Moturoa/Rabbit Island. This is a biodiversity compensation requirement of the associated resource consent (see RC140543, Condition 49). Areas chosen for restoration should be protected for this purpose. It is likely that a change in classification for that area of the Reserve (e.g. to Scenic Reserve status) will be required.

## 2.2 SIGNIFICANT NATIVE HABITATS

Despite the large-scale modification that has taken place, remnants of six 'Significant Native Habitats' remain on the Islands (see Figure 4). These sites have been assessed under the Native Habitats Tasman programme<sup>12</sup>. Detailed Ecological Assessment Reports for each of these six sites have been prepared by Michael North and are available on Council's website: [www.tasman.govt.nz/link/moturoa](http://www.tasman.govt.nz/link/moturoa). This section of the Plan briefly describes the values and identifies management issues associated with each of the six sites. Objectives and policies that apply specifically to these sites are also presented in this section.

### 2.2.1 TŌTARA-KANUKA FOREST REMNANT

#### VALUES

The western end of Rough Island is home to the only remaining example of original forest cover of the barrier Islands of the Waimea/Waimeha Inlet. Only one other similar remnant exists in Te Tau Ihu, which can be found in Golden Bay/Mohua<sup>13</sup>. This small remnant of lowland tōtara-kanuka-mixed broadleaf forest (0.77 ha in area) is of very high ecological value and forms one of the key sites for conservation in the Motueka Ecological District. Overall the site is regarded to be in very good condition.

Young lowland tōtara trees dominate the canopy of this small secondary forest remnant. They are present either as a taller component of the canopy or as emergents. Adult to mature kanuka are also present, with one adult broadleaf that may have been planted. The broadleaved canopy or sub-canopy is of kohuhu, fivefinger, mahoe and mapou. Young mapou regeneration is widespread up to 4m tall. Regeneration of all these species other than fivefinger and kohuhu abounds. Tagasaste have been planted through the site.

The understorey is variable. Some areas are dense with broadleaved regeneration, particularly mahoe and mapou. Others are more open, perhaps where the canopy is denser. The ground is largely covered in mossy litters, with generally very sparse vegetation. Some patches of houndstongue fern occur locally. The sedge *Carex raoulii/testacea* and the hookgrass *Uncinia scabra* are very rare. Where the canopy is more open, an exotic grass sward dominates. Some old man's beard seedlings occur locally in such areas, as do occasional broom, barberry, spindle and bracken. Hawthorn is rare. Some manuka and ngaio plantings occur around a short section of margin.

<sup>12</sup> Council initiated the Significant Native Habitats project to survey natural areas on private land and on public land outside public conservation lands. The project aims to survey the extent, type and values of natural vegetation, wetlands and wildlife habitat that remain.



#### ISSUES & OPPORTUNITIES

The forest remnant has been well managed as a Recreation Reserve. There are extensive plantings adjoining the site, undertaken with indigenous species appropriate to the area. These constitute a very significant conservation initiative, including a lowland tōtara component. Further plantings are underway and are encouraged.

There is an inevitable tension between planting for recreational amenity versus ecological restoration at this site. From a pure restoration perspective, the whole end of the peninsula could be revegetated back into native forest. This is not occurring here, as the area is also managed to provide access to open spaces for recreation. Further plantings could still occur into existing grassy areas and along the coastal margin, without compromising the open space values.

Weed impacts are relatively minor and it would be easy to eliminate some altogether, such as hawthorn, barberry and spindle. Old Man's Beard invasions need to be controlled, and broom and gorse control around the margins should be continued as necessary. The tagasaste within the tōtara forest should be removed, as it can seed into these dry sandy soils. It is also moisture competitive with young natives in such conditions.

The drying of the forest interior as a result of land clearance is a concern, but one which is difficult to address. Small islands of forest such as this one are a human artefact. Prior to clearance, continuous swathes of forest would have ensured moist conditions prevailed within forest interiors most of the time. Today, air moves through the remnant forest heated and dried by the surrounding open environment, markedly changing the interior conditions, making regeneration problematic for some species and

<sup>13</sup> As a result of the 2014 Treaty Settlements, Golden Bay now has an official dual name: Golden Bay/Mohua.

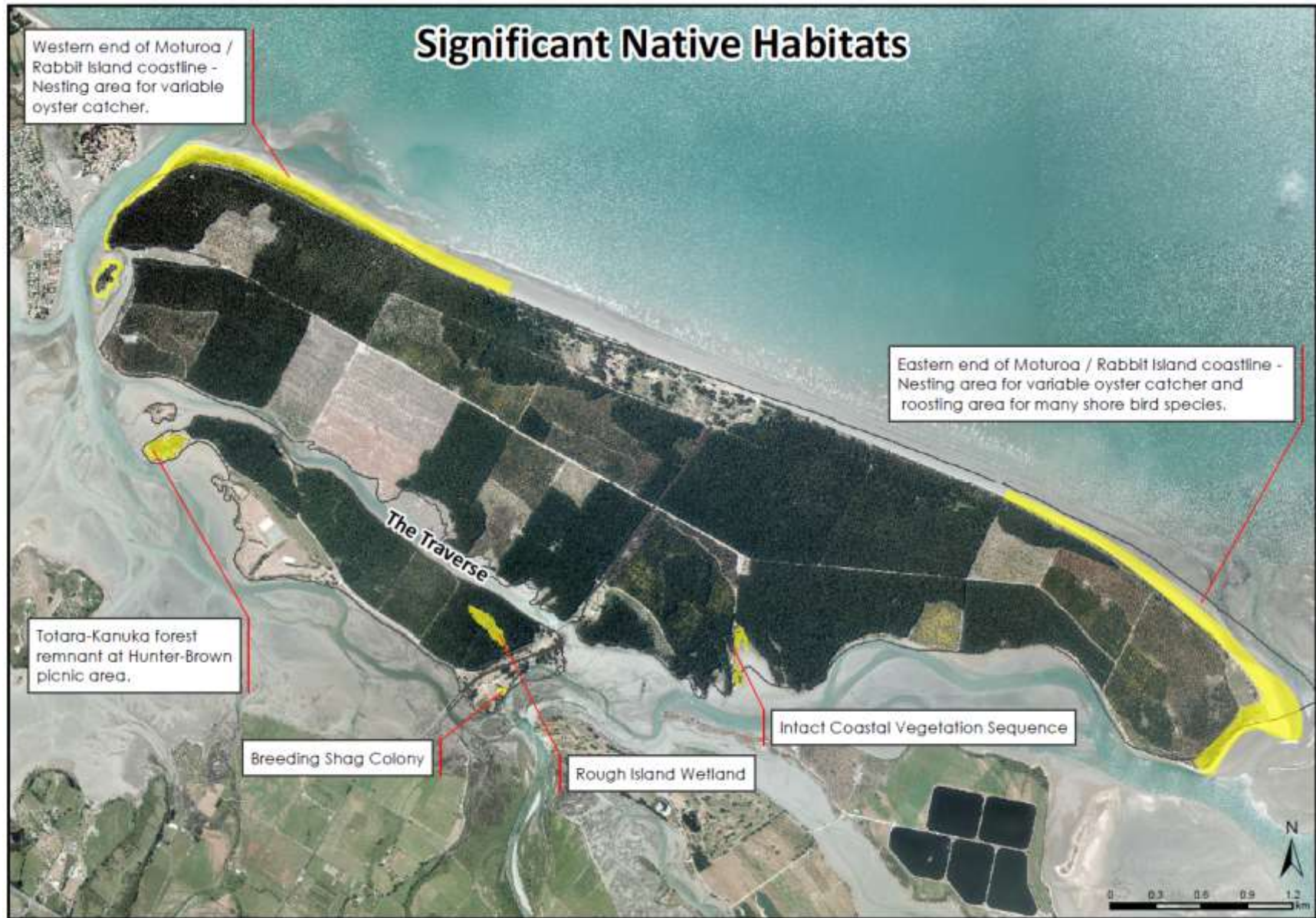


Figure 4: Significant Native Habitats on the Islands



eliminating others such as ferns. There is no effective way to address such changes other than ensuring that dense vegetation is maintained around the margins, and by reintroducing species that are failing to regenerate through restoration plantings. The proliferation of tracks within the forest itself should also be minimised.

## OBJECTIVES

- 1 To recognise the biodiversity significance of the tōtara-kanuka forest remnant at the Hunter Brown picnic area on Rough Island.

## POLICIES

- 1 Initiate a public consultation process to change the reserve classification of the western end of Rough Island from Recreation Reserve to Scenic Reserve, to provide appropriate protection for the significant ecological values of this site.
- 2 Continue to expand the overall size of the forest remnant, by revegetating adjacent land with eco-sourced indigenous species and, where possible, creating sequences of indigenous vegetation from estuary margin to forest. When the western block of plantation forest on Rough Island (which occupies land classified as Recreation Reserve) is harvested, consider expanding the tōtara-kanuka forest restoration project into this area, starting with the coastal margins adjoining the Traverse.
- 3 Eradicate weeds where practicable (e.g. tagasaste, hawthorn, barberry and spindle) and continue to control other weeds as required (e.g. Old Man's Beard, broom and gorse).
- 4 Minimise the number of tracks through the forest remnant, including vehicle tracks around individual trees.

### 2.2.2 ROUGH ISLAND WETLAND

#### VALUES

This 2.85 ha wetland site is classed as a fen, as it is groundwater fed. The wetland is located toward the south eastern end of Rough Island (see Figure 4). The two main vegetation types found in the Rough Island wetland are extensive manuka and ti kouka/cabbage tree scrub/forest and open areas of low weed-dominated wetland vegetation. The latter areas contain patches of native reeds, sedges and grasses.

As 99.8% of wetlands have been lost from the Motueka Ecological District, all remaining wetland remnants (including the Rough Island wetland) are of extreme value.

This wetland is known for the only South Island populations of the sedges *Baumea articulata* and *Carex fascicularis*, both at their southern national distribution limits, and for the regionally rare wetland willowherb *Epilobium pallidiflorum*. Many other indigenous wetland plants that are common in the region's lowlands are not present at the site, probably because of the low fertility associated with the underlying beach deposits. This highlights the unusual, if not unique, nature of the Rough Island wetland.

The site is in moderate condition, although prone to weed invasion. The surrounding pines are due to be harvested in 2016, which will allow more light into the wetland but also make it vulnerable to further weed invasion and potential wind damage.



#### ISSUES & OPPORTUNITIES

Active management is required to ensure the long term survival of this wetland. Actions should include weed control, restoration of its margins to create a buffer zone, and further legal protection via a change of reserve classification. The importance of such an initiative could not be overemphasised considering the unique nature of this wetland.

Weed control: Blackberry, pines and gorse should be controlled where they occur within the wetland itself. Where they grow around the margins they are not a problem to the wetland, but they will continue to invade unless a buffering margin of indigenous forest is established. Crack willow should be poisoned and old man's beard eradicated.

A number of the dominating wetland weeds are not readily controlled due to their ubiquitous nature and life cycles. For example, it would be futile to attempt to control species such as oval sedge, creeping bent and lesser spearwort, which almost exclude all indigenous species from large areas.

**Revegetation:** When the pines are felled in 2016 there will be an opportunity to greatly enhance the wetland by replanting its margins with an indigenous forest buffer. This would serve to shade out blackberry and gorse, and enhance the value of the wetland by reinstating a natural wetland to dryland sequence of indigenous vegetation.

**Monitoring:** The populations of *Carex fascicularis* and *Baumea articulata* should be monitored periodically to determine whether exotic elements are impacting negatively on these species, as these are the only known South Island populations.

## OBJECTIVES

- 1 To recognise the biodiversity significance of the Rough Island wetland.

## POLICIES

- 1 Initiate a public consultation process to change the reserve classification of the Rough Island wetland site from Local Purpose (Plantation) Reserve to Scenic Reserve, to provide appropriate protection for the significant ecological values of this site.
- 2 Once pines are harvested in 2016, revegetate a buffer area of 30-50m in width around the outer edge of the wetland with eco-sourced native species.
- 3 Eradicate weeds where practicable (e.g. old man's beard and crack willow) and continue to control other weeds as required (e.g. blackberry, pines and gorse growing within the wetland).
- 4 Monitor the populations of *Carex fascicularis* and *Baumea articulata* periodically to determine whether anything is negatively impacting on these species and investigate/remedy if adverse impacts are detected.

### 2.2.3 INTACT COASTAL VEGETATION SEQUENCE

#### VALUES

This two-hectare site lies on low-lying sandy marine deposits just above the mean high water mark on the southern margin of Moturoa/Rabbit Island, near the boat ramp (see Figure 4). The site supports a coastal margin vegetation sequence from the edge of the saltmarsh herbfield through to tall manuka scrub, and includes a narrow to broad band of saltmarsh ribbonwood, areas of estuary tussock, and mixed vegetation of sea rush, tall fescue and knobby clubrush. Small areas of herbfield turf also occur.

Intact coastal margin vegetation sequences from saltmarsh herbfield to low forest/tall scrub are extremely rare in Motueka Ecological District. Coastal margin manuka forest/scrub is particularly rare and this may be the only remaining example within the Ecological District. Saltmarsh ribbonwood scrub has been substantially depleted.

Overall the site is in reasonably good condition, with weed impacts confined, and large areas where natural processes are unhindered by human activity. However, the low vegetation is potentially vulnerable to vehicle intrusion. With easy public access to the Island, fire is always a threat. Drought induced dieback of manuka is severe in places and it is likely that dry periods will continue to adversely affect the site.



## ISSUES & OPPORTUNITIES

A number of weeds are impacting on the site, but most can be easily managed. Pines should be felled and removed, gorse cut and stump treated and iceplant grubbed out. The few broom and Spanish heath could be readily dealt with. Tall fescue is a more intractable problem where it occurs, as it is embedded with indigenous species. Its distribution could be monitored to determine whether it is still invading.

All public vehicle access should be prohibited, by gating the track into the area.

When pines are due to be harvested, it is important that the operators are aware of the value of this site and avoid felling trees into it. Whilst logging is underway it would be advantageous to have the pines removed from the site at the same time, with minimum damage.

## OBJECTIVES

- 1 To recognise the biodiversity significance of the intact coastal vegetation sequence on Moturoa/Rabbit Island.

## POLICIES

- 1 Initiate a public consultation process to change the reserve classification of this site from Local Purpose (Plantation) Reserve to Scenic Reserve, to provide appropriate protection for its significant ecological values.
- 2 Gate the track into the area, to prevent public vehicles from accessing and damaging this site.
- 3 Eradicate weeds where practicable (e.g. pines, gorse, iceplant, broom and Spanish heath) and continue to control other weeds as required (e.g. tall fescue).
- 4 Ensure forest harvesting in the area is undertaken in a manner that avoids damage to the site.

### 2.2.4 SHOREBIRD BREEDING & ROOSTING HABITAT (MOTUROA/RABBIT ISLAND)

#### VALUES

As discussed above, Tasman District has eight coastal areas that are of international importance for resident and/or migratory shorebirds<sup>14</sup> - meeting selection criteria under the Ramsar Convention on the Conservation of Wetlands, to which New Zealand is a Party. The eastern end of Moturoa/Rabbit Island is included within these eight coastal areas.



The two Significant Native Habitat sites at the eastern and western ends of Moturoa/Rabbit Island coastline (see Figure 4) include the coastal dune sands of the upper beach, with much low lying driftwood in places, and adjacent open sandy areas. Native plants such as spinifex, pingao and shore bindweed are rare, but exist at a few locations in the

<sup>14</sup> Schuckard, R. & Melville, D.S. (2013). *Shorebirds of Farewell Spit, Golden Bay and Tasman Bay*. Prepared for Nelson City Council and Tasman District Council.

coastal dunes. Marram otherwise dominates the inland margin.



The beaches at both the eastern and western ends of Moturoa/Rabbit Island are breeding sites for torea-pango/variable oystercatcher, a threatened species. The island shorelines provides important roost sites and habitat for several shorebird species<sup>15</sup>, such as blackback gulls, kuaka/eastern bar-tailed godwit, torea/South Island pied oystercatcher, torea-pango/variable oystercatcher, hauhou/red knot, ruddy turnstone, ngutuparore/wrybill and kotukungutupapa/royal spoonbill.

#### ISSUES & OPPORTUNITIES

Torea-pango/variable oystercatcher nests are vulnerable to predation from animal pests, including feral cats, stoats, pigs and hedgehogs. Trampling of nests and disturbance of birds from recreational activities on the front beach are believed to be a major contributor to failed nesting attempts, in combination with potentially high impacts from pests. Continual changes in erosion and deposition of coastal sediments, due to natural coastal dynamics, affect the suitability of the site for nesting birds. Very low numbers of young birds are fledged. A voluntary group undertakes pest control near bird nesting and roosting areas, trapping for rodents, mustelids, possums and other predators.

Construction of a cycle trail parallel to the front beach at the western end of Moturoa/Rabbit Island has resulted in increased disturbance to shorebirds, with increasing numbers of recreational users now accessing this end of the beach during nesting season. Appropriate signage is required to inform visitors about the need to avoid nest site areas. It is critical that at least the eastern end is left relatively undisturbed and recreation limited to horse riding on the hard sand below the high tide mark.

<sup>15</sup> Schuckard, R. and Melville, D.S. (2013). Effects of selected activities on shorebirds in Tasman District: Management Issues and options for sites of international importance. Prepared for Nelson City Council and Tasman District Council.

## OBJECTIVES

- 1 To recognise and protect important shorebird nesting and roosting sites at the western and eastern ends of Moturoa/Rabbit Island.

## POLICIES

- 1 Limit recreational use of the eastern end of Moturoa/Rabbit Island to horse riding below the high tide mark or along Monaco Road, to protect significant shore bird nesting and roosting habitat.
- 2 Install signage at key locations on Moturoa/Rabbit Island to inform people about the importance of avoiding nest site areas and shorebird roosting congregations.

### 2.2.5 BREEDING SHAG COLONY

#### VALUES

A stand of mature *Pinus radiata* in Greenslade Park on the south-eastern margin of Rough Island provides habitat for a breeding shag colony. Exotic conifers offer breeding sites for karuhiruhi/pied shag and kawaupaka/little shag. Pied shag are nationally listed as 'threatened, nationally vulnerable' with 500-10000 breeding pairs estimated in 2012. Little shag and black shag are listed as 'at risk, naturally uncommon'. The site is one of only two known coastal nesting colonies for black shag within the Moutere and Motueka Ecological Districts.



This is perhaps thought to be the second largest breeding colony for pied shag in the Motueka Ecological District and Tasman Bay/Te Tai-o-Aorere (Haulashore Island near Nelson is probably larger). Only eight breeding colonies of pied shag are known in Tasman Bay/Te Tai-o-Aorere outside Abel Tasman National Park. Pied shag nest year round with peaks in spring and autumn, with multiple sequential nestings by different pairs in the same nest (i.e.

active nest number does not equate to the number of pairs that use the colony).

## ISSUES & OPPORTUNITIES

The pines trees which the birds frequent are succumbing to foliage burn from guano and are currently in decline. There are immediately adjoining mature pine trees that the colony could move to. No other management issues were noted in the 2012 ecological assessment report for this site. The colony is not seemingly disturbed by recreational activity below and around the trees.

## OBJECTIVE

- 1 To recognise and provide for shag breeding sites on the Islands.

## POLICY

- 1 Plant trees at various locations on the Islands coastal margins that can provide future roosting and nesting sites for the shag colony.

## 3.0 Cultural and Historical

### 3.1 IWI ASSOCIATION WITH THE ISLANDS<sup>16</sup>

#### VALUES

##### Te Ao Māori

For iwi, values are defined by Te Ao Māori, the Māori world view. Te Ao Māori is holistic and based on whakapapa and the relationship with all living things flora and fauna and natural resources. Te Ao Māori is the lens in which whānau, hapū and iwi identify values within the natural world, and has been defined as encoding of an experience in the natural world. Te Ao Māori perspectives are also founded on tikanga: a system or philosophy of conduct and principles practiced by a person or group. This is the interaction which whānau, hapū and iwi have with a geographical place or feature.

##### Mātauranga Māori

Mātauranga Māori or Māori knowledge systems are specific to Māori. The term has many definitions covering belief systems, values and knowledge, both in a traditional and contemporary sense. Māori values are derived from a traditional belief system based on mātauranga Māori and can be defined as instruments through which Māori make sense of, experience, interpret and manage their environment<sup>17</sup>. The use of mātauranga and tikanga is fundamental in the management of the Islands and their associated ecosystems. Healthy ecosystems sustain a diverse range of indigenous habitats and their inhabitants.

##### Whakapapa

Iwi believe there is a whakapapa connection to Moturoa/Rabbit, Rough and Bird Islands and the wider Waimea/Waimeha Inlet, through long-term occupation and the interconnectedness to place through āhikaa-roa. This connection is a spiritual and physical link with Moturoa/Rabbit Island. Through this whakapapa and spiritual connection, iwi have inherited obligation and responsibility to look after ecosystems and natural resources ngā taonga tuku iho associated with Moturoa/Rabbit Island. For iwi, their spiritual and physical survival is dependent on their ability to safeguard wāhi tapu and taonga as kaitiaki of the rohe<sup>18</sup>.

##### Kaitiakitanga

Through their whakapapa and spiritual relationship with Moturoa/Rabbit Island, iwi have a duty to their future generations to take care and protect wai and other taonga, such as natural resources. Iwi are the āhikaa-roa, kaitiaki, a duty demonstrated in the practice of kaitiakitanga.

Kaitiakitanga is a philosophy of traditional resource management, born of recognition that all elements of nature are related and that what happens 'upstream' affects what happens 'downstream'.

Pursuant to this philosophy, traditional rights to access and use key resources were premised and maintained on one's ability and willingness to uphold associated responsibilities. For example, 'rāhui' (temporary restrictions to access and use a given area or resource) may be imposed in order for the mauri of any given area or resource to be restored and thus the interests of future users recognised and provided for. Rights and responsibilities were collectively held and maintained by whānau, hapū and iwi depending on the resource in question. Failure to uphold one's responsibilities could result in the associated rights being removed or restricted.

Kaitiakitanga can be expressed in many different ways depending on the situation and all are correct for their context. Essentially, kaitiakitanga means rights, responsibilities and obligations to the next generations. Rights to access and use resources and the responsibility, duty of care and obligation to ensure the resources are accessible and fit for purpose for the next generations.



<sup>16</sup> Note that a brief summary of other historical values and uses of the Islands is included in Part 3 of this Plan.

<sup>17</sup> Henare 1988, 2001; Marsden 1988; Marsden and Henare 1992, Barlow 1993; Harmsworth 1997, 2013, Mead 2003.

<sup>18</sup> Tiakina te Taiao (2013). Cultural Impact Assessment - Nelson Tasman Cycleway Trust.

## Mauri

From a Māori perspective, natural resources are imbued with mauri – an intangible and intrinsic value described as an elemental force that binds all things together<sup>19</sup> and can be measured as the overall health of the natural world. Ensuring the mauri of natural resources are maintained is an integral part of the role of kaitiakitanga<sup>20</sup>. The assertion is that small shifts in the mauri or life force of any part of the environment (for example through use or misuse) would cause shifts in the mauri of immediately related parts, which could eventually affect the whole system.

## Ki uta ki tai

The concept of 'Ki uta ki tai' is an Te Ao Māori perspective outlining the way in which iwi exercise kaitiakitanga. It is a way to manage ecosystems and natural resources from a 'whole-of-landscape' approach from the mountains to the sea. This value underpins iwi priorities, emphasising the interconnectedness of ecosystems, which is intrinsically linked through whakapapa. Māori don't compartmentalise different aspects of the environment, but view it as one system, which is a management principle that can be applied to the Islands.

## Māhinga kai

The Islands, Waimea/Waimeha Inlet and catchments have been identified by iwi as an important māhinga kai area. Resources are harvested from the estuaries, river valleys, wetlands, from the river mouths and along the coastal margins. Moturoa/Rabbit, Rough, and Bird Islands are all home to a variety of taonga, kai species and ecosystems of cultural significance to iwi.

The spatial and temporal distribution of wāhi tapu on Moturoa/Rabbit Island is evidence that the island ecosystems sustained whānau tūpuna for generations. Rivers and streams provided native fish, including the grayling (now extinct), inanga, koaro, kokopu, tuna/eel and koura. Tasman Bay/Te Tai-o-Aorere provided the opportunity for major fishing expeditions for species such as tāmure/snapper, mako/shark, and pātiki/flounder, requiring the use of sophisticated fishing nets. The estuaries provided extensive shellfish gathering areas, for species such as kūtai, tuangi, tio, tuatua, pipi, to name a few. In the past, coastal estuarine birds were also harvested, including the banded rail, dotterels, poaka, herons, kuaka, karuhiruhi and kotukungutupapa/royal spoonbills<sup>21</sup>. Bulk supplies of young birds and fish were preserved for winter storage. Many birds are now threatened and protected such as the tuturiwhatu/banded

dotterel and the banded rail, which are held in high esteem by iwi. The kotuku/white heron, which has a presence at the Islands, is a taonga species and regarded as tapu and an environmental indicator by iwi.

The island wetlands, which contained pockets of native vegetation such as tōtara, matai and kahikatea, provided productive sources of raw materials for building. These lowland forests and wetland habitats were also home to birds such as weka, kaka, falcon, kereru, parakeet that were also harvested for kai. The wetlands and lowland forests provided sites where plants were collected historically for weaving and rongoā purposes. "Ngā Mara Harakeke"/the remnant flax garden, located on the north-eastern side of Moturoa/Rabbit Island, was established by Ngāti Kuia and Ngāti Tūmatakokiri and possibly earlier iwi. Four harakeke varieties were harvested for preparation of kete, whariki, chords, net-making, muka, kākahu, tāniko and other garments and provided materials for housing and fishing.

Traditionally, māhinga kai associated with these ecosystems were used to sustain the spiritual and physical wellbeing of whanau and hapū. Mānaakitanga, or providing hospitality to visitors, by offering local specialities from the area reflects on the mana of iwi. Safeguarding these resources is a priority for iwi.

## ISSUES & OPPORTUNITIES

### Exercising kaitiakitanga in management and decision-making

One of the most fundamental issues facing iwi is their ability to participate in decision-making over natural resources and the environment, for geographical areas of cultural significance. The ability to act as kaitiaki allows for Te Tau Ihu values to be recognised in management plans.

### Loss of māhinga kai

The loss and destruction of māhinga kai is a key issue for iwi. For iwi, the loss and destruction diminishes the mauri of the environment, and the ability of iwi to practice mānaakitanga, through traditional harvesting of kai species. The ability to provide local cuisine for manuhiri is a reflection of mana. When māhinga kai are compromised and traditional foods can no longer be harvested, this has a detrimental impact on the hapū and iwi to mānaaki their visitors and, as a result, a loss of mana. Moturoa/Rabbit Island has been a māhinga kai area for a long period of time, but māhinga kai have been severely compromised as a result of wastewater disposal from Bell Island, biosolid application, pollution and other human induced activities.

<sup>19</sup> Marsden RM (1975). *God, Man & Universe: A Māori View* in 'Te Ao Hurihuri: The World Moves On'.

<sup>20</sup> Environs Holding Ltd (2011). Assessing the mauri of the Kaipara.

<sup>21</sup> PF Olsen Ltd (2014). *Tasman District Council Forests: Forest Management Plan for the Period 2014/2019*. Report prepared by Peter Wilks and Sally Haddon for Tasman District Council.

## Degradation of mauri of ecosystems

The degradation and destruction of ecosystems, water and taonga species “ngā taonga tuku iho”, compromises the mauri or health of a species, ecosystem or waterbody. If the mauri of Moturoa/Rabbit Island is reduced, this has a negative impact on the health and mauri of the people.

## OBJECTIVES

- 1 To acknowledge and support iwi as the kaitiaki of the Islands.
- 2 To give recognition and effect to iwi values in management of the Islands, where consistent with legislation.
- 3 To maintain the health and mauri of the Islands, associated ecosystems, species and waterbodies.
- 4 To manage the Islands holistically as one ecological and cultural system.

## POLICIES

- 1 Establish and facilitate a good working relationship and communication strategy between iwi and Council. This involves establishing a meaningful relationship whereby iwi have a management role, with input into decision-making beyond the RMA consenting processes (refer to the Cultural Work Plan).
- 2 Council staff will work together with iwi to develop, implement, monitor and periodically review a Habitat Protection and Restoration Work Plan for the Islands (see Part 2, Section 7). Projects to be included in this Work Plan should have a focus on restoration of island ecosystems, wetlands, freshwater tributaries, coastal dune systems and estuarine environments. The Work Plan should encourage planting of eco-sourced indigenous species in appropriate areas and provision of habitat for threatened flora and fauna species, while restoring māhinga kai areas.
- 3 Protect culturally significant sites such as the mara harakeke gardens, and wāhi tapu. Ensure public facilities and infrastructure are located in areas away from archaeological, cultural or ecological sites of importance to iwi.
- 4 Include environmental and cultural ethics on signage, to discourage abuse of sensitive sites. Signage should be interpreted in a culturally sensitive manner, with input from iwi.

- 5 Council staff will work together with iwi to prepare an interpretation plan for the Islands, which (where appropriate) includes signage for culturally significant sites that tells their story. Pou pou may also be installed on the Islands (iwi should lead this project).
- 6 Develop and implement a Cultural Work Plan (see below), which outlines how to best integrate Te Ao Māori values and kaitiakitanga aspirations into reserve management. The Work Plan may provide additional guidance for the management of issues that affect iwi values, such as signage, forestry, recreation and biosolids.

## 3.2 WAHI TAPU, ARCHAEOLOGICAL SITES & TAONGA

### VALUES

The Islands have extensive cultural and archaeological values. As at 2016, there are twelve recorded archaeological sites on the Islands. Their general locations are shown in Figure 5. Moturoa/Rabbit Island is considered wāhi tapu for iwi and is a culturally sensitive area, as supported by the archaeological evidence.

The recorded archaeological sites at the western ends of the Islands are thought to be associated with the Māori fishing village at Grossi Point at Mapua, occupied as early as 1200AD. Many of the recorded archaeological sites include midden and oven finds, indicative of pre-European occupation and fishing activities. A series of sites that existed close to the northern beach on Moturoa/Rabbit Island appear to have been destroyed.



All archaeological sites (i.e. both recorded and unrecorded sites) are protected by the Heritage New Zealand Pouhere Taonga Act 2014, the Reserves Act 1977 and the Resource Management Act 1991.

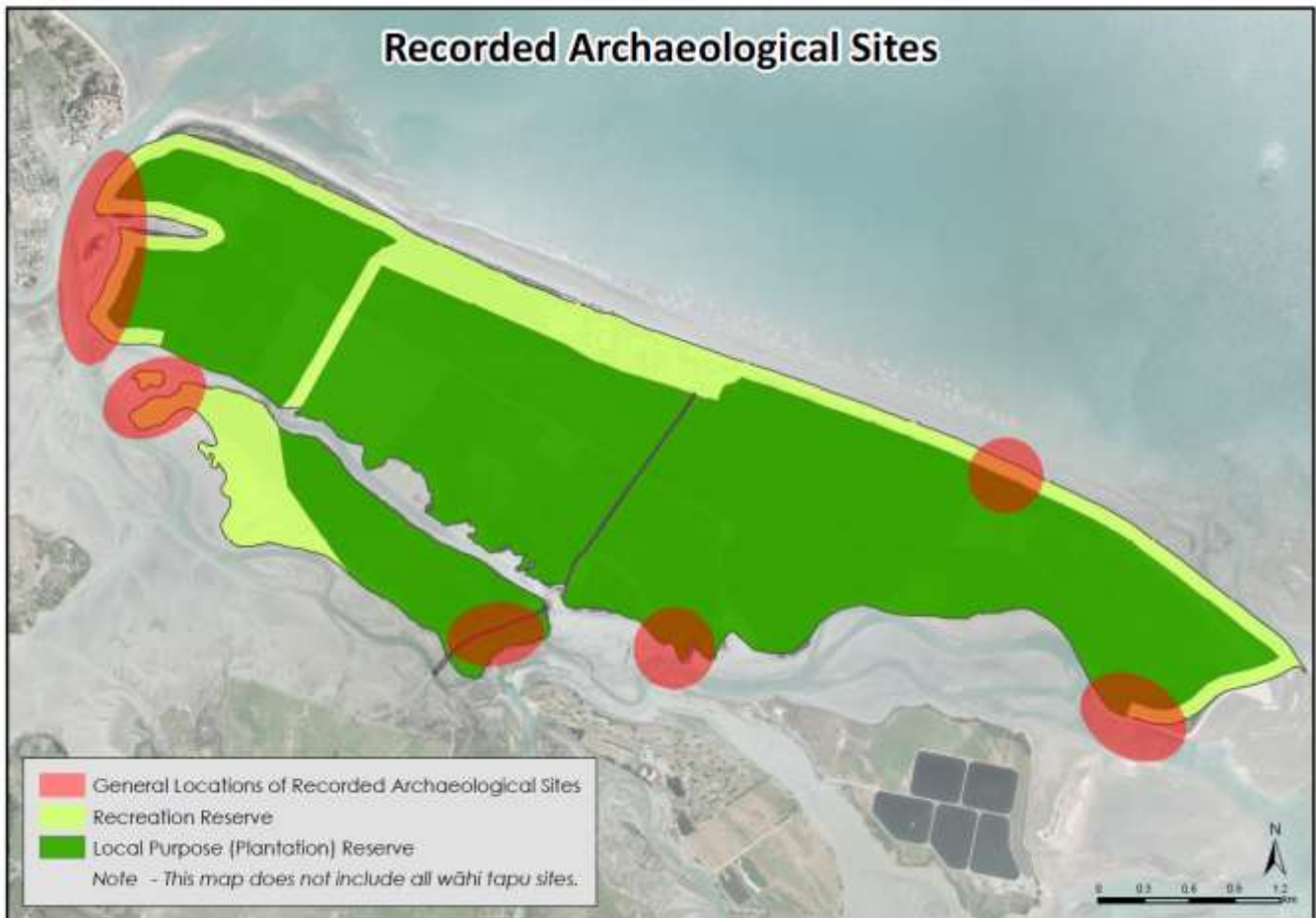


Figure 5: General locations of Recorded Archaeological Sites on the Islands

## ISSUES & OPPORTUNITIES

### Damage to archaeological sites

Both recorded and unrecorded archaeological sites are vulnerable to loss or damage from natural processes, earthworks, construction of buildings, land use or other development. This risk is significant, particularly for unrecorded archaeological sites. Just because an archaeological site is recorded does not implicitly give it more value than an unrecorded site. Accordingly, it is important that both recorded and unrecorded archaeological sites are adequately protected.

All activities undertaken on the Islands must comply with the requirements of the Heritage New Zealand Pouhere Taonga Act 2014, in relation to the protection of recorded and unrecorded archaeological sites. It is illegal to modify or destroy an archaeological site without obtaining an archaeological authority from Heritage New Zealand. An authority should be obtained where development may affect recorded archaeological sites or where there is reasonable cause to suspect unrecorded sites are present.

There is a need for more investigation, recording and proactive protection of archaeological and cultural sites on the Islands. Consideration should also be given to interpretation of the history and archaeology of the Islands.

### Accidental discovery

There is a high risk of accidental discovery of cultural material occurring on the Islands. An accidental find is when an unrecorded archaeological site, taonga, kōiwi or wāhi tapu is revealed (e.g. through earthworks or erosion). Iwi are included in the process when unrecorded archaeological sites are discovered.

Archaeological assessments can provide information about whether there is reasonable cause to suspect unrecorded sites are present.

To manage the risk of the accidental discovery and potential damage to recorded and unrecorded archaeological sites, works involving earthworks or the construction of buildings on the Islands should be accompanied by an archaeological assessment. This assessment would identify any new sites, assess effects on recorded sites and assess if there is reasonable cause to



suspect unrecorded sites are present. Along with informing when an archaeological authority is required (where recorded sites are affected or unrecorded sites are suspected), the results of the assessment should be incorporated into project design.

The Accidental Discovery Protocol included in Appendix 1 of this Plan is to be used to mitigate any damage to and/or fossicking of culturally sensitive sites. However, where an archaeological authority has been obtained, this takes precedence over the Accidental Discovery Protocol.

### **Protection of wāhi tapu and taonga**

Continual management of wāhi tapu sites, urupā and kōiwi and taonga, and protection of these values from further disturbance and destruction, is a concern and high priority for iwi. The twelve recorded archaeological sites and other sites identified in the future are best protected by keeping the ground surface undisturbed and by preventing the establishment of large growing trees. The Heritage New Zealand Pouhere Taonga Act 2014 also requires the protection of all archaeological sites, both recorded sites and unrecorded sites not yet revealed. To reduce damage by fossickers, new sites should not be publicly identified.

### **OBJECTIVES**

- 1 To manage and protect wāhi tapu and other areas of significance to iwi in a culturally appropriate way.
- 2 To retain, protect and conserve recorded and unrecorded archaeological sites.

### **POLICIES**

- 1 Protect all recorded and unrecorded archaeological sites from damage, in accordance with the provisions of the Heritage New Zealand Pouhere Taonga Act (2014).
- 2 Where an archaeological authority is not required, apply the Accidental Discovery Protocol for the Islands (see Appendix 1) for all activities on the Islands and where archaeological sites are uncovered through natural processes.
- 3 Ensure any activities involving earthworks or the construction of buildings are designed to minimise risks to recorded and unrecorded archaeological sites, including requiring an archaeological assessment for these activities.

- 4 Provide information to the public on archaeological requirements, including the illegality of damaging or modifying an archaeological site.
- 5 At each of the locations where archaeological sites have been recorded, the ground surface should be left undisturbed and large growing trees should be actively prevented from becoming established<sup>22</sup>.
- 6 Develop a protection/restoration plan for recorded archaeological sites in conjunction with iwi and include this within the Cultural Work Plan and Habitat Protection and Restoration Work Plan. Restoration planting can be a mechanism to protect wāhi tapu.

---

<sup>22</sup> Note that management of the totara-kanuka forest remnant at the Hunter Brown picnic area requires careful management in this regard, as it is also a sensitive archaeological site.

## 4.0 Forestry and other uses of Local Purpose (Plantation) Reserve

### 4.1 FORESTRY



#### ACTIVITY DESCRIPTION

The Local Purpose (Plantation) Reserve areas on Moturoa/Rabbit and Rough Islands (see Figure 1) are managed to produce an "approximately equal annual revenue" from the growing of *Pinus radiata*. This objective has been restated by successive forest management plans. Forestry has been undertaken on these Islands since the 1920s. The Islands are divided into many blocks, each containing different age stands. Forestry on the Islands comprises 35% of Council's total forestry portfolio.

The forestry operation at Moturoa/Rabbit Island and Rough Island is subject to an Act of Parliament which prescribes that a minimum of 10% of the net profit derived from the sales of forest products are to be made available for funding of recreational activities on the Islands. Section 3 of the Waimea County Council Empowering Act 1979 states:

*"The Council shall apply 10% of the net profit from the sales of forest products and associated activities conducted on the land described in the Schedule [i.e. Rough and Moturoa/Rabbit Islands] in each financial year, or such greater proportion of it as it considers necessary, for the purposes of the adequate maintenance and improvement of the reserves on that land for recreational purposes, or for the purposes set out in section 80 of the Reserves Act 1977."*

Council outsources all service delivery for forestry operations and maintenance activities. The forestry

<sup>23</sup> Forests in New Zealand are governed by rules related to New Zealand's Kyoto commitments to reduce the nation's carbon footprint and contribution to associated climate change. Council's forest portfolio contains 1,964.3 hectares of forest that was existing forest as at 31st December 1989. At the time of harvest, these stands will be subject to a deforestation tax equivalent to the tonnes of CO<sub>2</sub> projected to be released from decomposition of the forest at a unit financial value determined by

activities are managed by an independent Forestry Manager, who is responsible for harvesting and marketing management. Council's Commercial Manager is responsible for the overall management of Council's forestry portfolio, and reports to the Council via the Commercial Subcommittee. Council's forestry responsibilities under the Emissions Trading Scheme (ETS)<sup>23</sup> are currently managed by PF Olsen Ltd.

All activities within the Council forests are subject to management within a framework set by forest managers, environmental policies and Environmental Management System (EMS). Council has adopted the Forest Stewardship Council (FSC) principles, criteria and the FSC standards of good forest management. These standards include ecological, social and economic parameters.

Operational management: Operational management of the forest plantation areas is currently contracted to PF Olsen Ltd (the Forest Manager), who manage all of Council's forestry assets. Forestry operations typically involve planting, silviculture, nutrient supplementation, weed control and harvesting.

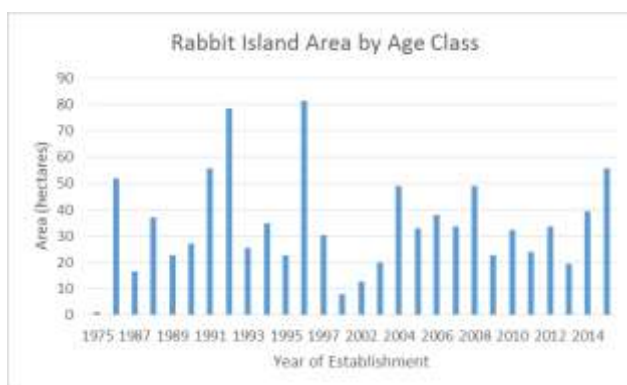


Figure 6: Age class distribution data for forests on Moturoa/Rabbit and Rough Islands (shows total area of forest planted on the Islands each year, for the period 1975 to 2015)

Planting: Council has an ongoing programme for replanting forest areas following harvesting. The replanting programme has been developed using age class distribution data (see Figure 6). For any stand, planting is carried out during the winter immediately following completion of harvesting. The replanting programme

the internationally traded emission units. This tax is payable if the forest is not replanted or, if left to regenerate naturally, does not achieve the regulated heights and stocking densities. A total of 1,065.7 hectares was planted on 'Kyoto compliant' land that was vacant as at 31st December 1989 and have been registered to participate in the NZ Emissions Trading Scheme. These areas are subject to the accrual of emissions credits and liabilities under that scheme.

follows harvesting. It is self-funding in the year of harvest and has no additional capital funding requirements.

**Silviculture:** The current silviculture regime results in stands being left until age five to six years, when they are pruned to 3.0 metres. Trees are then second pruned to a minimum of 6.0 metres and thinned to a final crop stocking of 375-400 stems per hectare. From this time on, trees are left through to harvest.

**Nutrient requirements of *Pinus radiata*:** The Islands' soils are nitrogen deficient. Application of biosolids as a fertiliser to forested areas on Moturoa/Rabbit Island (see Part 2, Section 4.2) effectively eliminates the need for nitrogen, but applications of phosphate and boron may still be necessary. Nitrogen fertiliser may still be required where biosolids have not been applied.

**Weed and pest control:** Weed control activities are undertaken on an annual programme, subject to seasonal requirements. Pest control is facilitated largely by volunteer efforts, with financial assistance from Council. Pest levels are generally low, but when pest control is required extra resources are provided by Council.

**Harvesting:** All harvesting is undertaken using ground based systems. Harvested logs are transported to nearby log markets (e.g. Nelson Pine factory and Port Nelson). Age class distribution can be used in developing future harvesting plans. The long term harvesting plan is to produce an even flow of timber with rotation ages no less than 25 years for unpruned stands and 27 years (preferably 30 years) for pruned stands.

The commercial benefits of the forestry activity include:

- 1) Efficient and effective use of resources, to maximise Council's economic return. Revenue generated by this activity is used to:
  - a. fund recreational activities on the islands; and
  - b. reduce rates, by offsetting profits against other Council activities.
- 2) Social benefits, industry and employment opportunities in the Region.
- 3) Diversification of commercial income streams for Council and ratepayers.

**Income projections:** A valuation undertaken in June 2015 estimated the gross profit from harvesting that Council expects to receive from the forestry assets on Moturoa/Rabbit and Rough Islands between 2016 and 2024 (see Table 1). These estimates assume that forestry blocks will be harvested in accordance with the current harvesting plan. Projected harvest volumes are also shown in Table 1.

Year ending June	Harvest volume (m <sup>3</sup> )	Gross profit from harvesting
2016	30,727	\$2,150,890
2017	30,306	\$2,121,420
2018	42,174	\$2,952,180
2019	50,914	\$3,563,980
2020	13,338	\$933,660
2021	32,903	\$2,303,210
2022	22,894	\$1,602,580
2023	17,251	\$1,207,570
2024	2,886	\$202,020

Table 1: Projected harvest volume and gross profit from harvesting on Moturoa/Rabbit and Rough Islands.

## ISSUES & OPPORTUNITIES

All forestry operations are undertaken to the standards specified in the New Zealand Environmental Code of Practice for Plantation Forestry. The Code of Practice sets out guidelines which ensure safe and efficient forest operations that meet the requirements of sound and practical environmental management.

In order to minimise the risk to forest owners, managers and contractors, it is important that relevant legislation and agreements are identified and appropriate measures put in place to ensure that breaches of legislation are avoided. The key pieces of legislation include:

- Biosecurity Act 1993;
- Forest and Rural Fires Act 1977<sup>24</sup>;
- Forests Act 1949;
- Resource Management Act 1991;
- Hazardous Substances and New Organisms Act 1996;
- Climate Change Response Act 2002;
- Heritage New Zealand Pouhere Taonga Act 2014;
- Health and Safety at Work Act 2015.

All have significant ramifications in their area of responsibility.



<sup>24</sup> Fire is discussed in Part 2, Section 5 of this Plan.

## Cultural values and archaeological sites

Iwi concerns relating to forestry on Moturoa/Rabbit and Rough Islands centre around the disturbance, damage or destruction of recorded or unrecorded archaeological sites or wāhi tapu and potential impacts on the Waimea/Waimeha Inlet. Monoculture poses threats to the Islands natural ecosystems and the surrounding Waimea/Waimeha estuarine environments. Sedimentation into the Inlet and Tasman Bay/Te Tai-o-Aorere during harvest rotations is of concern, in terms of its potential adverse effects on the wider ecosystem health of the Inlet and Bay.

Under the Heritage New Zealand Pouhere Taonga Act 2014, it is the landowner's responsibility to identify any sites of cultural significance prior to undertaking any work which may disturb or destroy such sites. If a site is found or suspected on any forestry block, the protocols specified in PF Olsen's EMS, and any others specifically developed in conjunction with Heritage New Zealand and iwi or other stakeholders, must be observed. Where such circumstances require, an 'Authority to Modify or Destroy' will be sought from Heritage New Zealand. Such authorities are similar in function to a resource consent and, if granted, normally come with conditions that must be met. The process to apply is documented in PF Olsen's EMS.

Update checks for any sites will be required before any harvesting or related earthworks commences. There are several areas on the Islands that are identified as 'of-interest' to iwi, but are not recorded with the New Zealand Archaeological Association. To date, no finds/discoveries of sites or artefacts have been made within those areas. No biosolid spraying is carried out in the areas, but no other restrictions have previously been applied to any other operations.

## Health and Safety

Forestry is recognised as a high risk environment, with numerous activities that require risk management. The risk of serious injuries and/or fatalities occurring on forest harvesting sites is a key focus for Council and the Forest Manager. Mitigation methods to reduce this risk include greater security, signage and deterrents to entry. Health and safety requirements are currently actively managed by the Forest Manager. Where practical and safe, public access and use of forests for recreation purposes may be provided for (see Part 2, Section 1.1). To maintain control over usage, permits are required for public entry into some of the plantation forest areas. Health and safety legislation requires that, where health and safety becomes or is a significant issue (e.g. in areas where operational activities are underway), then public access to these areas should be limited.

## Use and maintenance of roads

Most of the roads that provide motorised vehicle access to forested areas are not open to vehicles driven by members of the public. However, a few roads are also made available for public use most of the time. Roads with this dual purpose include Boat Ramp Road and Cooper Road on Moturoa/Rabbit Island and Tic Toc Road on Rough Island. Conflicts can potentially occur between operational vehicles (e.g. logging trucks, biosolids tankers) and private vehicles.

Operational vehicles often cause more damage to gravel roads than lighter, privately owned vehicles. This can become an issue when operational activities are underway in forestry blocks that adjoin these roads. Maintenance and reinstatement of these dual-purpose roads is the responsibility of those undertaking operational activities (i.e. Forest Manager and/or biosolids contractor).

## Ecological restoration activities undertaken by community groups

A number of active community groups undertake activities within or adjacent to plantation reserve areas on Moturoa/Rabbit Island and Rough Island. Voluntary activities include: pest weed control, vertebrate pest trapping, amenity and ecological restoration plantings, walking track assets and dune/foreshore restoration efforts. These dedicated groups act independently, but are coordinated at an overview level by the Forest Manager and Council's Reserves and Facilities staff. They are a highly valued community resource that are jointly achieving significant ecological restoration gains than could normally be achieved by centralised management interventions alone. Council staff and the Forest Manager need to work cooperatively with, and provide support to, these groups.





## OBJECTIVES

- 1 To continue to manage the Local Purpose (Plantation) Reserve areas as a sustained yield commercial forest, with the aim of harvesting similar timber volumes each year.
- 2 To maximise the economic return on investment, whilst providing environmental and recreational benefits to Tasman District ratepayers through:
  - i. the funding of maintenance, protection and development of the Recreational Reserve areas on the Islands; and
  - ii. effective rate reductions via application of profits to other Council activities.
- 3 To apply the Principles and Criteria of the Forest Stewardship Council to forest management on Moturoa/Rabbit Island and Rough Island.
- 4 To allow public access to some forestry areas for recreational, cultural or ecological restoration purposes, subject to restrictions (e.g. closure of areas for health and safety reasons while operational activities are underway).

## POLICIES

- 1 Council will continue to manage the forestry assets on Moturoa/Rabbit Island and Rough Island. This may be contracted to an independent Forest Manager.
- 2 Forests on Moturoa/Rabbit Island and Rough Island should be managed by:
  - i. growing trees and producing logs for the domestic and export market;
  - ii. ensuring that the productivity of the land does not decline;
  - iii. ensuring that environmental values are identified and maintained;

- iv. ensuring that cultural values and sites are identified and protected;
- v. ensuring that other forest values and products are identified, protected and where possible enhanced;
- vi. harvesting the trees as close as possible to their economic optimum age; and
- vii. replanting following harvesting, where appropriate; and
- viii. enabling recreation activities in areas where forestry operations are not currently underway.

- 3 All forestry operations should be undertaken to the standards specified in the New Zealand Environmental Code of Practice for Plantation Forestry.
- 4 Forest harvesting operations should be managed in an environmentally sustainable manner that reduces sedimentation and runoff into the Waimea/Waimeha Inlet.
- 5 Forestry activities near areas of cultural and/or ecological significance (see Part 2, Sections 2 and 3 of this Plan) should be minimised. Adequate buffer margins around these areas should be established by retiring them from forestry and replanting with eco-sourced indigenous species.
- 6 Forests on Moturoa/Rabbit and Rough Islands are principally *Pinus radiata*, but could include a mix of species in future.
- 7 As part of the Council's risk management strategy, a variety of forest tending regimes should continue to be practised for increased timber marketing flexibility.
- 8 The Forest Manager should take all practical steps to maintain tree health, to protect the forest from fire or any other threat, and to maintain or enhance soil fertility.
- 9 The Forest Manager, in conjunction with Council, will determine the most appropriate market for harvested logs given the age class and current market conditions.

- 10 Whenever operational activities take place within the forestry blocks adjoining dual-purpose roads<sup>25</sup> such as Tic Toc Road, Boat Ramp Road and Cooper Road, the relevant contractor (i.e. Forest Manager and/or biosolids contractor) will be responsible for maintaining and reinstating these roads.

Roads should be reinstated within one month of the activity concluding. The minimum standard for road reinstatement should be the former condition of the road, just prior to the operational activity taking place.

- 11 Public access to land planted in forestry may be allowed by the provisions of this Plan, signage, or by permit (with appropriate insurance if deemed necessary), in locations and for recreation purposes that the Council sees fit, provided access can be restricted at any time for reasons of fire danger, personal health or safety or other operational considerations.

- a) On Moturoa/Rabbit Island, priority will be given to:
  - i. the maintenance and expansion of the walking/running/cycling trail network on the western half of the island; and
  - ii. development of a new horse trail parallel to the eastern side of Ken Beck Drive, to provide access between the equestrian area on Rough Island and the front beach on Moturoa/Rabbit Island.
  
- b) On Rough Island, walkers, runners, cyclists, horse riders and dog walkers may access roads and tracks within or alongside forestry blocks, when harvesting or other forestry operations or biosolid application activities (including stand down periods) are not underway.

Refer to Part 2, Section 1.1 of this Plan for detailed information, objectives and policies about recreation activities within plantation reserve areas on Moturoa/Rabbit and Rough Islands.

- 12 Council staff and the Forest Manager should work in cooperation with, and provide support to, voluntary groups who are working on ecological restoration projects within or alongside plantation reserve areas.



<sup>25</sup> Dual purpose roads provide motorised vehicle access for both (i) vehicles driven by members of the public, whose destination is a nearby Recreation

Reserve area or boat ramp and (ii) vehicles used for operational activities in the adjoining forestry blocks (e.g. logging trucks, biosolid tankers etc).

## 4.2 BIOSOLIDS

### ACTIVITY DESCRIPTION

The Nelson Regional Sewerage Business Unit (NRSBU) holds a land use consent (RM940534) and discharge permit (NN940379V3) for the disposal of biosolids to forested areas on Moturoa/Rabbit Island. The discharge permit expires on 10 October 2020. High quality (Class A) biosolids, produced via wastewater treatment on Bell Island, are pumped across the Waimea/Waimeha Inlet to holding tanks on Moturoa/Rabbit Island. Tankers transport biosolids to the forest, where they are sprayed under the trees as fertiliser.



Biosolids have been applied to approximately 600 ha of *Pinus radiata* plantation at Moturoa/Rabbit Island since 1996, with repeat applications made approximately every three years. A long-term research trial was established in 1997 to investigate sustainability of the biosolids application. Tree growth response and nutrition were measured along with a number of other environmental variables such as soil and groundwater quality. Biosolids application has resulted in significantly increased tree growth. The forests have experienced wood volume increases between 14 and 20 percent, with negligible decrease in wood density. Biosolids application has boosted soil organic matter, nitrogen and phosphorus, indicating an improvement in soil fertility. Higher silviculture costs associated with increased tree growth need to be offset against additional income received from the plantation forestry.

The current resource consent includes conditions requiring regular monitoring of the activity and ways to mitigate potential environmental effects. It also describes areas excluded from biosolid application and the requirement to maintain buffer zones from specific features. The buffer zones requirements differ depending on the standard of biosolids being applied.

The current resource consent conditions outline the required buffer zones for application of Class A biosolids. These buffer zones include setbacks of:

- 50m from mean high water

- 15m from areas where the public has unrestricted access to areas
- whichever is greater for areas bordering the Domain (i.e. the Recreation Reserve area located just behind the front beach on Moturoa/Rabbit Island):
  - 20m in from the forest canopy
  - 30m in from the Domain canopy
  - 100m in from the edge of forest canopy between November and March

If a lower standard of biosolids are produced, the setback requirement increases.

When Class A biosolids are to be applied to an area of forest, signs are installed one month prior to biosolid spraying and remain in place for another month after spraying is completed. The signs are intended to discourage members of the public from accessing the forestry block during this stand down period. If a lower standard of biosolids were to be applied, the stand down period would be increased to one year.

Figure 7 shows the areas on Moturoa/Rabbit Island where biosolid application is permitted under the current resource consent (i.e. until 10 October 2020), assuming Class A standards are met.

### ISSUES & OPPORTUNITIES

Biosolids contain micronutrients and organic material and, worldwide, they are commonly applied to land as a means of restoring degraded soils or boosting the productivity of soils within areas of low natural fertility.

The application of biosolids to land can be controversial. Biosolids contain microbiological and chemical contaminants, and there are legitimate concerns about public health, environmental and economic risks. Traditionally, sewage sludge has been regarded as a waste product, and most commonly managed by disposal to the ocean or to landfill. Ocean discharge of biosolids is not a preferred solution, while disposal to landfill is becoming increasingly expensive and produces greenhouse gas emissions. The conversion of sewage sludge into biosolids and the controlled application of biosolids to land provides an opportunity to take advantage of the fertilising and soil conditioning properties of this resource, while avoiding the disposal problem.

In order to minimise the risks associated with the land application of biosolids, quality control and management practices are required. New Zealand currently has no specific regulations that govern all aspects of biosolids preparation and use, although resource consent is required for this activity, under the Resource Management Act 1991. A document produced by the New Zealand Forest Research Institute Ltd in 2010 sets out the best management

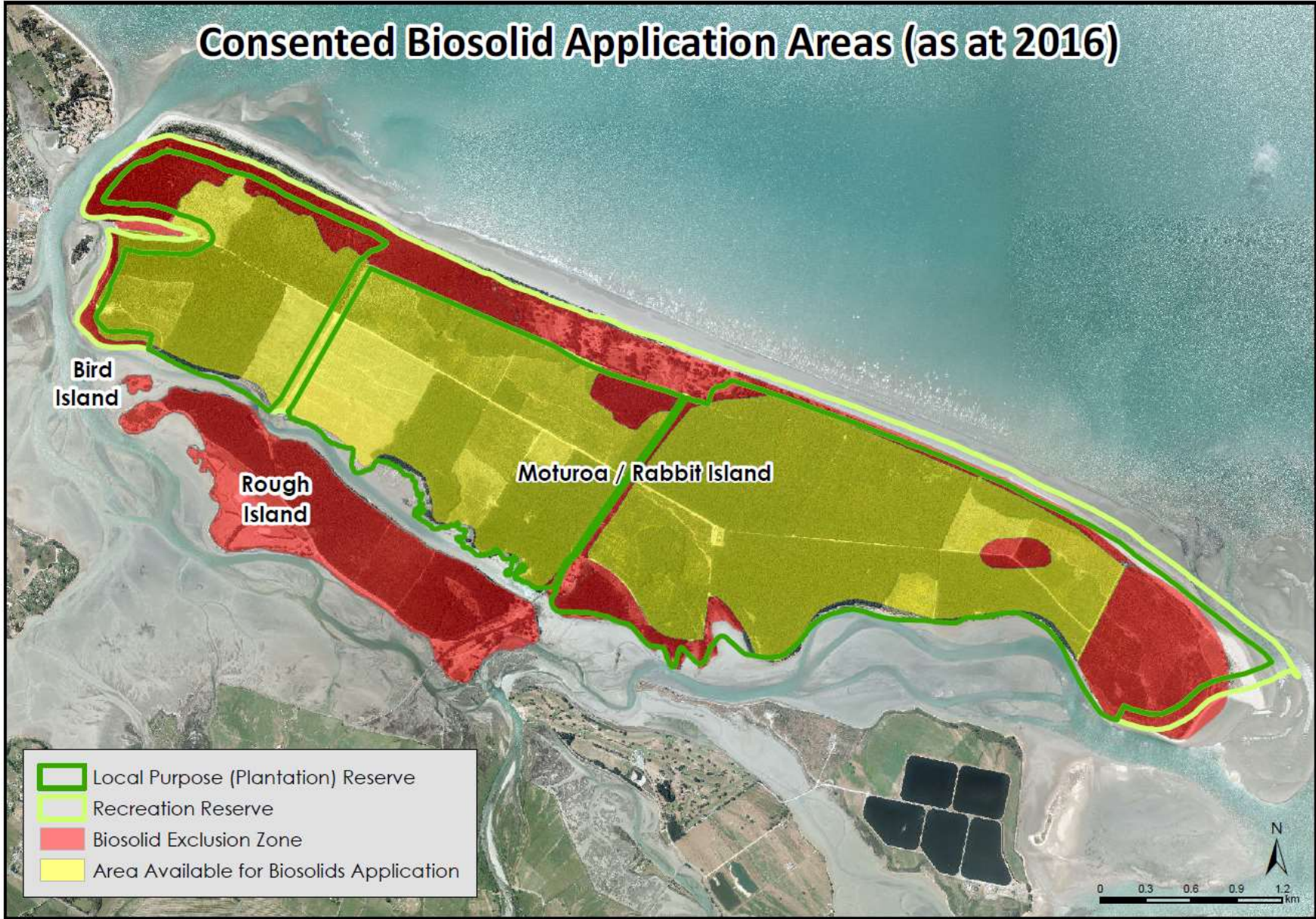


Figure 7: Consented Biosolid Application Areas on Moturoa/Rabbit Island (as at 2016)



practices for applying biosolids specifically to forest plantations in New Zealand. To ensure appropriate best management practice is used in all aspects of the application of biosolids to forest plantations, these best management practices need to be read and applied in conjunction with the Guidelines for the Safe Application of Biosolids to Land in New Zealand (NZWWA, 2003) and the New Zealand Environmental Code of Practice for Plantation Forestry (NZFOA, 2007). Application of biosolids to the Islands should be in accordance with these best practice guidelines.

Heavy metals derived from biosolids can accumulate in the soil if excessive amounts are applied. Within the biosolids trial area on Moturoa/Rabbit Island, where a higher rate is being trialled, monitoring has identified an accumulation of some heavy metals. These include copper and zinc in the surface soil and copper, chromium, lead and zinc in the litter layer. However, the overall concentration of these heavy metals is considered to be low for soils. Groundwater quality, which has been monitored quarterly, has not been affected by biosolids application. The Cawthron Institute monitoring programme for effects of biosolids on the Waimea/Waimeha Inlet could not detect any adverse effect as at 2014.

There is an increasing obligation for local government to engage with the community and, in particular, with iwi regarding the use of biosolids. Without community and iwi dialogue, decisions may conflict with the values and views of the community.

The disposal of biosolids to forested areas of Moturoa/Rabbit Island is offensive to iwi, as they see it as a potential risk to the mauri and the health of the wider Waimea/Waimeha Inlet area, biodiversity and to people. Although monitored, runoff from land where biosolids have been applied can potentially result in harmful effects on biodiversity and surrounding ecosystems, if not managed properly. Iwi do not support the use of biosolids around culturally and ecologically sensitive areas. Areas of ecological significance also include māhinga kai areas where resources are harvested. There is specific tikanga around the application of waste to an ecosystem or waterway. The spraying of biosolids is seen to reduce the quality and mauri of māhinga kai areas, reducing the ability of iwi to harvest kai.

Odour is a by-product of biosolid application. This can become an issue when spraying occurs near recreational activities. Council's compliance officers receive a number of complaints each year about offensive odours from biosolids at Moturoa/Rabbit Island, with some complaints from people living as far away as Redwood Valley.

Members of the public should be made aware that there are several health and safety issues associated with both

forestry operations and biosolid application on the Islands and advised that they visit the forest at their own risk. For example, workers who are involved with spraying of biosolids are required to be vaccinated to mitigate the risk of contracting infections from any residual viruses or bacteria that may potentially have survived during wastewater treatment. This mitigation is based on a risk management approach. While infection is highly unlikely, there is no guarantee that other visitors to forested areas will not be affected. To date, the NRSBU has no record of any person being infected due to contact with biosolids.



The discharge permit for application of biosolids to forested areas on Moturoa/Rabbit Island expires on 10 October 2020. The NRSBU intends to apply for a new resource consent for essentially the same activity. This will provide an opportunity for Council, iwi and the community to reconsider where biosolids are best applied, what areas should be excluded and what buffer zones should be required. It is noted that changing the method of biosolid disposal is an expensive undertaking. The consent application should take into consideration, and where possible align with, the vision, objectives and policies of this Reserve Management Plan. It should also take into consideration the reserve classification (see Figure 1). During public consultation on the Draft Plan, Council received strong feedback that biosolids should not be applied to any land on Rough Island. Accordingly, future resource consent applications/conditions should ensure that biosolid application is excluded from Bird Island, Rough Island and all areas on Moturoa/Rabbit Island classified as Recreation Reserve and other culturally or ecologically significant areas. Sufficient setbacks/buffer zones should also be provided.

Under this Plan, the area west of Conifer Park will be used for both forestry and recreational purposes. A Grade 2 mountain bike park is planned for this area (see Part 2, Section 1.1). Application of biosolids to this area of Recreation Reserve is no longer appropriate.

## OBJECTIVES

- 1 To limit the application of biosolids on the Islands to Moturoa/Rabbit Island only (i.e. keep Rough and Bird Islands free of biosolids).
- 2 To ensure appropriate best management practice is used in all aspects of the application of biosolids to forest plantation areas on Moturoa/Rabbit Island.
- 3 To recognise the benefits of applying biosolids to forest plantation areas on Moturoa/Rabbit Island as a fertiliser, while balancing this with the need to protect cultural and ecological values and avoid conflicts with people undertaking recreational activities on the Island (particularly in areas classified as Recreation Reserve).
- 4 To balance the most effective and efficient means for disposal of biosolids.

## POLICIES

- 1 All activities associated with the application of biosolids to forested areas on Moturoa/Rabbit Island should be undertaken in accordance with the relevant best practice guidelines. As at 2016, these included:
  - Best Management Practices for Applying Biosolids to Forest Plantations in New Zealand (New Zealand Forest Research Institute Ltd, 2010);
  - Guidelines for the Safe Application of Biosolids to Land in New Zealand (NZWWA, 2003); and
  - New Zealand Environmental Code of Practice for Plantation Forestry (NZFOA, 2007).
- 2 The NRSBU is encouraged to engage and meet with iwi before submitting any applications for new or varied resource consents associated with the application of biosolids to Moturoa/Rabbit Island. Note: Iwi are particularly interested in exploring various ways environmental effects can be mitigated, whether the total amount of biosolids applied can be reduced, and other alternatives available for treating and disposing of sludge from the Bell Island Wastewater Treatment Plant.
- 3 Exclusion areas, where no application of biosolids is permitted, should include:
  - a) Rough Island, Bird Island and all areas classified as Recreation Reserve on Moturoa/Rabbit Island;
  - b) the harakeke/flax swamp near the northern coast of Moturoa/Rabbit Island;

- c) māhinga kai areas;
- d) sites of archaeological significance (i.e. areas of land where recorded archaeological sites, wāhi tapu, kōiwi or other taonga are located);
- e) areas identified as significant native habitats (see Figure 4 of this Plan);
- f) the eastern tip of Moturoa/Rabbit Island (area east of Corder Road);
- g) the coastal margin and waterways;
- h) land subject to tidal inundation (taking sea level rise into account);
- i) any areas where heavy metal concentrations exceed acceptable standards; and
- j) any other areas identified by resource consent conditions.

5 Buffer zones should provide an adequate setback from sensitive cultural and ecological sites, the coastline and waterways (including the Traverse, tributaries and estuarine areas) and recreational activities that take place on the Islands.

6 During the time period between Labour Weekend and Easter each year, biosolid application activities should be scheduled to avoid (or be well set back from) areas where recreational activities take place on the Islands. The latter includes all areas of Recreation Reserve and roads and tracks available for specific recreation activities (e.g. Monaco Road, Boat Ramp Road, Tasman's Great Taste Trail and the western half of Moturoa/Rabbit Island).

7 The NRSBU is encouraged to investigate ways of preventing or minimising odour from crossing the boundaries of the areas being sprayed (e.g. factor wind direction and strength into the spraying schedule, if practicable).

8 Options for minimising odour issues resulting from biosolid application activities should be explored as part of any future resource consent application.

9 Forestry blocks scheduled for biosolid application should be adequately identified on the ground (e.g. by taping them off) and have signage in place, notifying the public of the stand down period that applies to that block, at least one month in advance of spraying.

10 Recreational groups who wish to apply for a permit to undertake one or more recreational events within forested areas should contact Council at least three months prior to the proposed event, to allow enough time for biosolid spraying schedules to be amended (if practicable and/or necessary).

## 5.0 Hazards

### 5.1 FIRE

Fire is an ever present danger to the plantation forest and island ecosystems, compounded by high summer temperatures, frequent drying southerly winds, and the presence of high-use public recreation areas.

#### OBJECTIVES

- 1 To minimise the risk of fire damage, to both the plantation forest and other reserve areas.

#### POLICES

- 1 A comprehensive fire control plan and evacuation plan will be maintained by Council and the Forest Manager. Fire equipment will be in a complete state of readiness at all times.
- 2 Public access to, and use of, the Island may be prohibited during periods of extreme fire danger. Events may be cancelled during these times. Event organisers may be required to provide onsite fire equipment at times of high to extreme fire risk.
- 3 Vegetation of low flammability should be established between Recreation Reserve and plantation forest, to reduce the risks of accidental fire spread. Preference should be given to using indigenous species for this purpose.

### 5.2 CONTAMINATED SOILS

During the 1970s, a small part of the Recreation Reserve area alongside Barnicoat Road on Moturoa/Rabbit Island was used as a landfill site to dispose of fish offal, timber waste and chemicals from the Fruitgrowers Chemical Company. At least 24 tanker loads (approximately 6,000 litres) of liquid waste is thought to have been dumped into pits at this location. The site record suggests that the pits were capped in the 1980s. However, no leachate control was put in place, meaning groundwater in the vicinity could potentially be contaminated. This area of land is listed on Council's Site Contamination Register.

As the pits have been capped, there should not be any issue in allowing people to walk/run or cycle along Barnicoat Road (this Recreation Reserve area is proposed to form part of the walking/cycling network on the western half of Moturoa/Rabbit Island - see Figure 2). An issue would arise if the area was disturbed through earthworks or forest harvest and the cap is disturbed.

<sup>26</sup> The Ministry for the Environment predictions are for sea levels to rise by one metre over the next 100 years. See Ministry for the Environment

#### OBJECTIVES

- 1 To avoid any disturbance of soil in or near known locations of contaminated sites on Barnicoat Road South (as listed in Council's Site Contamination Register).

#### POLICES

- 1 Ensure forestry and biosolids contractors are aware of the locations of contaminated sites along Barnicoat Road South and plan their activities to avoid disturbing the caps of the pits.

### 5.3 CLIMATE CHANGE, SEA-LEVEL RISE & COASTAL PROCESSES

#### ISSUES & OPPORTUNITIES

Analysis of aerial photographs since the 1940s show that the front beach of Moturoa/Rabbit Island has seen a build-up of sand along the western end and erosion to the shore line along the eastern end (see Figure 8). Occasional storms have caused short term fluctuations in this trend.

Before plantation forests were established, the Islands were prone to wind erosion of the sand deposits. The plantation has been successful to some degree in halting this trend. However, coastal erosion is impacting the front beach of Moturoa/Rabbit Island, and this is anticipated to be exacerbated by projected sea level rise, causing both higher sea levels and an increased incidence of storm events. It is predicted that sea level rise will also impact other low-lying parts of Moturoa/Rabbit Island, Rough Island and Bird Island, e.g. through tidal inundation of low-lying areas and changes in salinity levels. Some areas are currently affected by poor drainage and ponding after significant rainfall events, which may occur more frequently as a result of climate change.

Although it is difficult to predict the future effects of rising sea level as a result of climate change, the results of modelling are shown in Figure 9. The land shaded in pink are the areas that are likely to be inundated following a one metre rise in sea level<sup>26</sup>. The areas shaded in blue indicate ground levels that are lower than the existing high tide line. Blue shaded areas that are located away from the shoreline (such as the existing picnic areas behind the front beach on Moturoa/Rabbit Island) are less likely to be inundated. Figure 9 does not predict how the shoreline might be eroded by storm events and high tides.

(2008). *Coastal Hazard and Climate Change: A Guidance Manual for Local Government in New Zealand*.



Figure 8: 1948 aerial photo of the Islands, showing extensive sand dune areas on Moturoa/ Rabbit Island. Low-lying areas of Rough Island are also visible.



*Figure 9: Areas at risk of inundation at high tide by a sea level rise of one metre.*

The shoreline profiles around the Islands vary, ranging from steep banks that are a metre or more high, to locations where the shoreline consists of a gentle gradation from the intertidal area to dry land. The effects of sea level rise on existing and proposed shoreline vegetation will therefore vary from location to location.

The hardening of coastal margins, by tide-banks, roads and protection works, results in a loss of high-shore habitat and ecosystems. If sea levels rise as predicted, these losses will be compounded, i.e. additional high-shore habitat will be lost. This Plan continues to make provision for managed retreat (e.g. relocating the foredune, roads and facilities inland), rather than building rock seawalls, revetments or other hard structures to protect existing infrastructure.

Putting measures in place in an attempt to control coastal erosion is extremely costly and attempts at control are seldom fully effective. Predictions of rising sea levels and changing weather patterns suggest that erosion forces will increase. The most cost effective response to coastal erosion is to:

- i. design facilities so that erosion will not cause costly damage; and
- ii. to reduce the rate of erosion by promoting the natural build-up of shoreline sand dunes that will act as erosion buffers during storms.

Council also has a current resource consent to undertake sand 'push-ups' along the front beach, to further slow erosion of the foredune. Activities on the Islands must comply with the objectives and policies in the New Zealand Coastal Policy Statement 2010.



Council is aware that management of the plantation forest may need to change in order to respond to sea level rise. Low-lying areas of the Islands may no longer be suitable for growing *Pinus radiata* in future. There is also a risk of saltwater intrusion of groundwater within the area, which will affect vegetation survival. In the longer term, forestry could potentially move from pines to a more natural, continuous cover native forestry, such as tōtara, with longer rotation periods. It may also be possible to retain economic benefits of a commercial forest.

## OBJECTIVES

- 1 To provide an adaptive response to the effects of climate change (including continuing coastal erosion, tidal inundation and changes in rainfall patterns) and to plan use and development accordingly.

## POLICES

- 1 Recognise and provide for the effects of sea level rise and climate change in relation to restoration projects, particularly for coastal margin species, where sea level rise projections show that extensive inland migration will be required over the next few decades.
- 2 Promote soft engineering and adaptation to coastal erosion, rather than hard defences.
- 3 Take a 'managed retreat' approach to sea level rise by ensuring that coastal hazards and climate change are taken into account in the location, design and construction of all buildings, facilities and improvements, and that facilities and structures in high risk areas are designed to be removable or expendable.
- 4 Map areas subject to ponding/high water tables after significant rainfall events, and manage these to mitigate impacts.
- 5 Vegetation management along the front beach of Moturoa/Rabbit Island should encourage deposition of windblown sand in the foredune area and minimise wind erosion of the dunes. Tall coastal trees should be progressively replaced with low growing, sand trapping vegetation. Preference will be given to planting indigenous species.
- 6 Damage to vegetation on shoreline dunes shall be avoided or otherwise minimised, by discouraging or controlling access to them by recreational users, vehicles and animals.
- 7 Investigate the possibility of reinstating the natural tidal flush into the low-lying area located between Tic Toc Road and the Rough Island events and equestrian park, to restore the ecological integrity and heritage significance of this wetland area.
- 8 Consider the potential impacts of sea level rise and salt water intrusion on plantation reserve areas when updating the Forestry Management Plan.

## 6.0 OTHER MANAGEMENT ISSUES

### ISSUES & OPPORTUNITIES

#### Temporary use of reserves for complementary purposes

Although the reserves have been classified according to the purpose for which they were held just prior to when the Reserves Act came into effect (1977), some plantation reserve areas are currently used for recreation purposes (e.g. Greenslade Park at the eastern end of Rough Island) and some recreation reserve areas have been temporarily incorporated into the plantation forestry operation (e.g. the forestry block just east of the Hunter Brown picnic area on Rough Island). Section 75 of the Reserves Act 1977 sets out the process Council must follow if it considers that it is necessary or desirable to afforest an area classified as Recreation Reserve because it isn't currently required for recreation purposes.

Temporary use for complementary purposes is considered appropriate in most instances. However, this Plan proposes to 'reclaim' some Recreation Reserve areas that have recently been logged, or are due to be logged within the next few years (e.g. the area west of Conifer Park on Moturoa/Rabbit Island, where a new Grade 2 mountain bike track is planned). Other areas, such as Greenslade Park, may benefit from a change in reserve classification, as it would be uneconomic to use this area for production forestry in future.



#### Buildings and infrastructure

Buildings and other structures should be limited to the kinds of structures that already exist and not be expanded. There should be no permanent structures situated around the shoreline, other than the existing boat ramps, now nor in the future.

At present there is one telecommunications mast at the eastern end of Moturoa/Rabbit Island. There should be a careful assessment of potential landscape effects on the Waimea/Waimeha Inlet, and appropriate conditions

imposed, when considering whether to permit alterations to this mast or the erection of additional masts.



#### Aircraft (including piloted aircraft, aerial drones and other unmanned aircraft)

The Islands lie within the Nelson Airport controlled airspace (piloted aircraft often fly low over the Islands when landing or taking off from the airport). Permission must be obtained from Air Traffic Control to fly any aircraft (piloted or unmanned) over, land on, or take off from the Islands. Compliance with all relevant Civil Aviation Authority (CAA) operating rules is also required. In the case of unmanned aircraft (e.g. aerial drones, remote controlled aircraft) approval is also required from Council to fly from, over, or land on the Islands.

Unmanned aircraft are a hazard in this location and also have the potential to disturb roosting or nesting birds, which may fly towards the airport, creating a potential bird-strike hazard (see Part 2, Section 2.1 of this Plan). Council's Policy on Flying Unmanned Aircraft over Council Land prohibits the use of unmanned aircraft in plantation forest areas and in places where a gathering of people is taking place. Use of unmanned aircraft at the Islands is considered inappropriate.

#### Training exercises

The scale, topography and forest cover of the Islands make them desirable locations for training exercises. Government and voluntary agencies such as the New Zealand Defence Force, New Zealand Police and LandSAR (New Zealand Land Search and Rescue Incorporated) have carried out a variety of training exercises on the Islands over the years. For example, forested areas have been used for police dog training, search and rescue training and small scale military training exercises. In the past, requests have

been made to carry out beach landings as part of these training exercises. The timing of such activities needs to be considered, to avoid disruption to nesting and roosting birds during the breeding season (September to March) for instance.

Under the Military Manoeuvres Act 1915, the Governor-General may proclaim land to be available for military manoeuvres. Any other intended defence activity, or other training exercise to be undertaken by an agency, requires prior approval from the land owner or administering body of the reserve (i.e. Council, in the case of the Islands).

### **Educational use and events**

The Islands provide ample opportunities for educational activities and events, such as the EnviroSchools 'Motorua Mission' held annually. Council encourages use of the Islands for such purposes.

### **Evaluating new proposals**

Proposals for new development such as walkways, cycleways, bird-watching hides, a rowing course, and others, each bring new opportunities, but may also foreclose other opportunities for recreation or restoration. It is impossible to predict what future developments may be proposed. Part 1 of this Plan articulates a clear vision for the Islands and describes the key outcomes against which all new proposals must be evaluated.

The iwi of Tiakina te Taiao provide cultural impact assessments (CIA) for activities in the rohe. The purpose of a CIA is to assess the potential impacts on cultural ecological values and ensure the spiritual and physical wellbeing of taonga important to iwi (including natural resources, people and sites) are enhanced, maintained or protected and kaitiaki responsibilities are upheld<sup>27</sup>.

## **OBJECTIVES**

- 1 To allow use and management decisions to cross the reserve classification boundaries where appropriate.
- 2 To limit built development on the Islands.
- 3 To keep the Islands free of aerial drones and other unmanned aircraft.
- 4 To encourage use of the Islands for educational events and activities.

---

<sup>27</sup> Tiakina te Taiao (2013). Cultural Impact Assessment Tasman Cycleway Trust.

## **POLICIES**

### **Temporary use of reserves for complementary purposes**

- 1 Those parts of the areas classified as Recreation Reserve that are not required for recreation purposes in the short term may be managed as part of the forestry plantation until such time as they are required for recreation. However, no biosolids shall be applied to any land that is classified as Recreation Reserve.
- 2 Those parts of the areas classified as Local Purpose (Plantation) Reserve that are not required for plantation purposes in the short term may be managed for recreation purposes until such time as they are required for forestry. An example includes Greenslade Park on Rough Island.

### **Buildings and facilities**

- 3 Buildings and facilities shall be limited to those required for the efficient use and management of the plantation and recreation reserve areas. They shall be located and designed to an appropriate architectural standard and with due regard to the risk of coastal erosion, sea level rise and tidal inundation. Service buildings shall be screened from view from recreation areas. See also: Part 2, Section 1.1, Policy 12 and Section 1.2, Policies 14 and 15.

### **Aircraft**

- 4 Aerial drones and other types of unmanned aircraft are not permitted to be flown from or over any part of the three Islands.
- 5 Piloted aircraft are not permitted to land on the front beach of Moturoa/Rabbit Island.

### **Training exercises**

- 6 Council staff should work cooperatively with government and voluntary agencies who wish to conduct training exercises on the Islands to identify the most appropriate sites for such exercises and to ensure that any adverse effects of training exercises on the Islands (including recreational users and staff working in plantation forests) are avoided or minimised.
- 7 Training exercises should not take place within Significant Native Habitat areas (see Figure 4).



- 8 Dogs may be used during training exercises undertaken within the interior of Moturoa/Rabbit Island, but will not be permitted on beaches or within 100 m of the coastline (to avoid disturbance to nesting or roosting birds).
- 9 Any training activities involving soil disturbance require prior approval of the Reserves and Facilities Manager, to prevent damage to archaeological or wāhi tapu sites or contaminated soil present on the Islands.
- 10 Overnight use of the Islands may be permitted, as part of a training exercise, with prior approval from the Forest Manager and Reserves and Facilities Manager.
- 11 Live firing, the use of ammunition, explosives and pyrotechnics during military or other training exercises should not be permitted.
- 12 Training exercises involving flying activities (including low flying, landings, dropping of personnel or cargo) may be considered on a case-by-case basis. Agencies are responsible for obtaining the required clearance from the Civil Aviation Authority (the Islands lie within the area covered by the Nelson Airport airspace).
- 13 Beach landings of vessels or other water craft should not be permitted during the shorebird breeding season (September to March).

#### **Educational events and activities**

- 14 Council encourages education providers to run educational events and activities on the Islands. Such use should comply with the relevant policies of this Plan, including those relating to event management in Part 2, Sections 1.1 and 1.2.

#### **Evaluating new proposals**

- 15 Applications for all activities requiring authorisation from Council will be assessed against the vision and key outcomes described in Part 1 of this Plan. Consideration will be given to whether a proposed activity is consistent with the key outcomes and whether conditions should be applied in order to ensure the proposed activity does not detract from the values of the Islands.
- 16 Cultural impact assessments (CIA) should be required as part of process for assessing and evaluating proposed new land uses or activities on the islands.

Note: The purpose of a CIA is to assess the potential impacts on cultural ecological values and ensure the spiritual and physical wellbeing of taonga important to iwi (including natural resources, people and sites) are enhanced, maintained or protected and kaitiaki responsibilities are upheld. The iwi of Tiakina te Taiao provide CIA for activities in this rohe.

- 17 Proposals for any significant new land use on the Islands will require a review of the management plan, including full public consultation (see Part 2, Section 7). Note for clarification – this requirement applies to the proposal to develop an Aquatic Flat Water Park in the Traverse and the proposal to cover an arena in the Rough Island events and equestrian park.



## 7.0 REVIEW OF RESERVE MANAGEMENT PLANS & UPDATES TO OPERATIONAL WORK PLANS

### ISSUES & OPPORTUNITIES

The Reserve Management Plan is the strategic document which sets the direction for how the Islands will be managed and is required to be reviewed at least every 10 years. Ten-yearly reviews of the Reserve Management Plan will ensure that changes in public needs and priorities are reflected in the Plan.

The management plan review process is prescribed by the Act. Section 41(3) of the Act requires a reserve management plan to: *'provide for and ensure the use, enjoyment, maintenance, protection, and preservation, as the case may require, and, to the extent that the administering body's resources permit, the development, as appropriate, of the reserve for the purposes for which it is classified ...'* The Act makes extensive requirements for public participation in the preparation of this framework. Once the management plan has been commented on, amended if necessary, and subsequently adopted by Council, managers can use the Plan as a basis for decision-making, knowing that their decisions will reflect the views of the public.

Implementation of this Reserve Management Plan will be supported by allied operational work plans. The work plans will list actions or tasks which are required to implement the Reserve Management Plan. The work plans will be updated annually, so that actions for the year can be matched to annual budgets. As they are operational plans, they will not be available for public consultation. However, Council will seek input from iwi and community groups in the development of these work plans.

As at the date that this Plan was approved, only two of the work plans had been completed. These are the Forestry Management Plan (which PF Olsen Ltd produced and covers the time period 2014-2019) and the Biosolids Management Plan (which the NRSBU produced and updates annually). Council staff are in the initial stages of developing the Communications Work Plan, but no work has yet been undertaken on the remaining five work plans. These will be progressively developed and updated over time, as resources allow.

The Cultural Work Plan will be developed in partnership with iwi and will set out details of how Council and iwi will work together on all aspects of implementation of this Plan, including the Plan review at the end of its term. A Habitat Protection and Restoration Work Plan will be prepared by 2019, in collaboration with iwi, environmental groups and other interested parties. This Work Plan will identify priority sites for restoration and enhancement and appropriate species for habitat and water quality, a weed

and animal control/eradication programme and include provisions for appropriate monitoring programmes and regular reviews.



### POLICIES

- 1 The Reserve Management Plan will be reviewed, and the boundaries between the areas classified for recreation and those classified for plantation purposes should be re-assessed, at intervals of not more than ten years.
- 2 The following operational work plans will be prepared and should be updated on a regular basis:
  - a) Cultural Work Plan
  - b) Recreation Work Plan
  - c) Communications Work Plan
  - d) Rough Island Events and Equestrian Park Work Plan
  - e) Habitat Protection and Restoration Work Plan
  - f) Game Bird Hunting Work Plan
  - g) Forestry Management Plan (updated every five years)
  - h) NRSBU Biosolids Management Plan (updated annually)

## 8.0 CHANGES TO RESERVE CLASSIFICATION

### ISSUES & OPPORTUNITIES

Some areas would be better classified as Scenic Reserve, at least in part, because of their high ecological values as this affords them greater protection. The areas include:

- ‘Rough Island wetland’, which lies within Local Purpose (Plantation) Reserve on Rough Island, which is managed for commercial forestry. It is of such uniqueness in the ecological district and region that formal reservation, for example, as a scenic reserve would be appropriate. It is arguably the most important unprotected site in the Motueka Ecological District.
- The lowland tōtara-kanuka forest remnant at the Hunter Brown picnic area on Rough Island. This is unique in the ecological district and ecological region for existing on coastal deposits, and it is deserving of a higher level of reservation – as a scenic reserve. It is located within a larger area classified as Recreation Reserve.

The current reserve classifications are not particularly appropriate for those sites that are (or could be) protected and managed primarily for biodiversity values. The Reserves Act states that such features or values shall be managed and protected (only) to the extent compatible with the principal or primary purpose of the reserve.

This also applies to areas to be restored as part of the biodiversity compensation package required for the Waimea Community Dam. The Commissioners’ decision on the resource consent applications for the Dam stated that:

*“... we strongly recommend to Council that, should existing reserves be chosen for elements of the biodiversity package, then the primary purposes for those parts of the reserves containing the biodiversity package sites should be changed in accordance with Section 24 of the Reserves Act to permanently protect the biodiversity values that are to be established and maintained.”*

### OBJECTIVES

- 1 To change the classification of some reserve areas to provide more appropriate legislative status (e.g. protection for Significant Native Habitat remnants).

### POLICIES

- 1 Following the adoption of this Reserve Management Plan, Council will initiate a public consultation process to change the reserve classification for areas:
  - a) with significant biodiversity values, i.e. the Significant Native Habitats referenced in Part 2, Section 2.2 of this Plan; and/or
  - b) where the primary purpose is for restoration and management of indigenous habitats, to provide these areas with better protection and a more appropriate legislative status; and/or
  - c) where it is highly unlikely that the land area is ever going to be used for the purpose for which it is classified (e.g. Greenslade Park on Rough Island, which is not intended to be used for forestry in future).
- 2 Any change of reserve classification at the western end of Rough Island should take into consideration the potential upgrade of the informal boat ramp and the need to provide adequate parking for vehicles and boat trailers. This may mean retaining some land as Recreation Reserve for this purpose.

## PART 3

### Background & Description



## Background & Description

### OVERVIEW OF KEY VALUES & USES

Covering some 1,200 hectares, the reserves on Moturoa/Rabbit Island, Rough Island and Bird Island are regionally significant. Highly valued by iwi, there are several wāhi tapu, urupā and archaeological sites located on the Islands. These barrier islands protect the Waimea/Waimeha Inlet and provide important habitat for indigenous flora and fauna. A well-loved recreation destination, the Islands provide opportunities for passive and active outdoor recreation. Popular activities include picnics/barbeques, walking, cycling/mountain biking, horse riding, dog walking on Rough Island, whitebaiting, orienteering and multisports. The northern coast of Moturoa/Rabbit Island provides access to a safe swimming beach, which is also used for horse riding, fishing, blo-karting, kite surfing and other watersports. The scenic views from the shorelines of the Islands contribute to their recreational value. Much of the land on Moturoa/Rabbit Island and Rough Island is managed as a commercial plantation forest, generating a significant income stream for Council. Some of the forestry revenue contributes to the operational costs of maintaining and improving the Recreation Reserve areas on the Islands and the remainder offsets rates. Biosolids (a product of the wastewater treatment plant on the adjacent Bell Island) are applied as a fertiliser to the forested area on Moturoa/Rabbit Island.



### RESERVE DESCRIPTION

This Plan covers all land on Moturoa/Rabbit, Rough and Bird Islands. These three Islands were acquired by the Crown between 1854 and 1944. All of Bird Island and parts of Moturoa/Rabbit and Rough Islands are reserved for recreation purposes, while the remainder of Moturoa/Rabbit and Rough Islands (excluding Ken Beck Drive, a legal road) are reserved for plantation purposes. All reserve areas on the three Islands have been vested in Council for control and management. Figure 1 shows the location of Local Purpose (Plantation) Reserve areas

(covering a total area of 968 ha) and Recreation Reserve areas (covering a total land area of 239 ha).

As the administering body for these reserves, Council is responsible for classifying the reserves and preparing and reviewing a management plan for them. Due to the close inter-relationship between the recreation and forestry uses of the reserve, this Plan covers both the recreation and plantation reserve areas. This Plan is intended to facilitate co-ordinated use, development and management of the three Islands. Operational work plans sit below, and must be consistent with, the Reserve Management Plan (see Figure 10). Some work plans (such as the Forestry Management Plan for plantation reserve areas) have been in existence for many years, whereas others are yet to be developed. Part 2, Section 7 of this Plan describes the purpose and general content of operational work plans.

### OFFICIAL PLACE NAME

Moturoa/Rabbit Island is now the official name of the Island previously known as Rabbit Island. This name change took place in 2014, as a result of the Treaty negotiations with the Crown and Te Tau Ihu iwi, under the Deed of Settlement. The origin and meaning of the name Moturoa is outlined in tribunal evidence provided by Ngāti Tama, Te Ātiawa, Ngāti Koata and Ngāti Kūia. The name translates to 'Long Island'. Moturoa/Rabbit Island was part of the Waimea/Waimeha Pā and surrounding environment with the Waimea/Waimeha Inlet.

### LOCATION AND PUBLIC ACCESS

The Islands are located approximately 11 kilometres by road west of Richmond, off State Highway 60. Rough Island is joined to the mainland by a purpose-built causeway. Another causeway connects Rough Island to Moturoa/Rabbit Island, at the eastern end of the Traverse.



Public access to the area is either via Redwood Road, which becomes Ken Beck Drive on Rough and Moturoa/Rabbit Islands, or by sea. Ken Beck Drive is open to the public during daylight hours (i.e. from dawn to dusk), year round.

This road may be closed during times of extreme fire risk, when there are high winds, and/or during storm events. Access to areas classified as Local Purpose (Plantation) Reserve on Moturoa/Rabbit Island is generally by permit only, with a few exceptions (see Part 2, Sections 1.1 and 4.1 of this Plan). Areas where biosolid application activities or harvesting, spraying or other forestry operations are underway are closed to public access for health and safety reasons.



## LEGAL DESCRIPTION

The land has no certificate of title. It comprises Islands No 3 (Rough Island), No 4 (Bird Island) and No 5 (Rabbit Island), all District of Waimea Islands, situated in Blocks II and III Moutere Survey District and Blocks I and II Waimea Survey District. Excluded from these is a public road (Ken Beck Drive), made legal by proclamation in the New Zealand Gazette 1930, pages 1461 and 2219. The three Islands are bounded by the mean high water mark.

## RESERVE STATUS

All land on the three Islands is a reserve subject to the Reserves Act 1977, with the exception of Ken Beck Drive<sup>28</sup> - a public road (see Figure 1).

## RESERVE CLASSIFICATION

Classification, as required by the Reserves Act 1977, was undertaken and notified in the New Zealand Gazette, No. 117, on 29 October 2015. Part of the land (239 ha) is classified as Recreation Reserve and the remainder (968 ha) is classified as Local Purpose (Plantation) Reserve. The reserve areas are shown in Figure 1.

## GEOLOGY AND SOILS

The three Islands together form a barrier between the estuarine waters of the Waimea/Waimeha Inlet and the open sea of Tasman Bay/Te Tai-o-Aorere<sup>29</sup>. The geology is

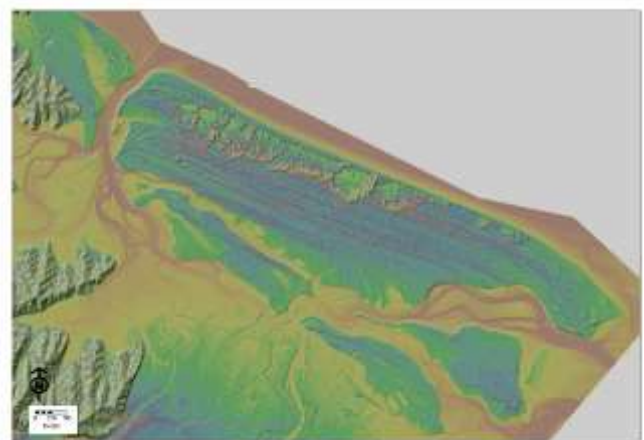
<sup>28</sup> Ken Beck Drive is the main road that crosses Rough Island and Moturoa/Rabbit Island in a north-easterly/south-westerly direction, ending at the southern edge of the front beach Recreation Reserve area.

made up of primarily beach gravels and dune sands from greywacke and granite, and is regarded as almost entirely Pleistocene deeply weathered Rabbit Island Gravel, overlaying lignite and clay with impeded drainage and moderate to low fertility.

Rough Island, Bird Island and a strip along the southern side of Moturoa/Rabbit Island are made up of Rabbit Island Gravel; slightly weathered, well rounded stones up to 250mm across. The bulk of Moturoa/Rabbit Island is made up of free draining Tahunanui Sand in the form of beach ridges and coastal dunes. The sand is grey, fine grained, with scattered shells. Between many of the beach ridges are thin swamp and estuarine deposits of sandy mud. An old beach ridge of fine gravels runs parallel to and some 300 metres inland of part of the northern beach. These deposits are up to 20 metres thick and appear to be less than 8000 years old. They have been laid down by longshore drift from erosion of cliffs at Te Mamaku/Ruby Bay<sup>30</sup> and from the delta of the Motueka River. Thin sandy soils have developed from the decay of vegetation cover, chiefly from pine needles, and most of the reserve is capable of growing vegetation. The soils are naturally low in nutrients.

The Islands have been formed by deposition of sea-borne material over the last 8000 years: in geological time it is a very recent formation, indeed they are still being formed. The interface between the Inlet and the open sea is in a state of continual change. The erosion risk is slight to moderate in relation to wind and longshore drift.

The foreshore and coastal waters are outside the reserve boundary, but they provide the greatest recreational and visual attraction for public use of the Islands. Management of activities in these areas is undertaken by Council in accordance with the Regional Coastal Plan. The Traverse (tidal waterway between Moturoa/Rabbit Island and Rough Island) is largely surrounded by the reserve.



<sup>29</sup> As a result of the 2014 Treaty Settlements, Tasman Bay now has an official dual name: Tasman Bay/Te Tai-o-Aorere.

<sup>30</sup> As a result of the 2014 Treaty Settlements, Ruby Bay now has an official dual name: Te Mamaku/Ruby Bay.

## Legislative Context

The first section of Council's Reserve General Policies document sets out the legislative context for reserve management plans. Readers are referred to that document for an overview of the relevant national legislation and Council policies. Additional information is contained in Appendix 2 of this Plan, which briefly describes relevant Council strategies, plans and policies.

Figure 10 outlines the hierarchical relationship between this Reserve Management Plan, the Reserves Act 1977, Council's Reserves General Policies document and operational work plans for the three Islands. The Reserve Management Plan is a strategic document that sets the management direction for the Islands. Work Plans sit beneath the Reserve Management Plan and will be developed once this Plan is finalised. Work Plans set out the operational details of implementing the Plan (e.g. list the tasks and actions to be undertaken each year) and are regularly updated to match budgets.

Council's Reserves General Policies document has been prepared to consolidate policies that apply to all reserves owned and/or administered by the Tasman District Council, including the three Islands covered by this Plan. Reserve General Policies are policies that generally apply across all reserves, to avoid the need for them to be repeated in all reserve management plans. The policies in this Plan are site specific, to meet the specific needs of the Islands. These policies, therefore, supersede the Reserves General Policies where there are any inconsistencies.

The relationship of reserve management plans to Council's Reserves General Policies document and other relevant Council documents is discussed further in Appendix 2.

### MĀORI LEGISLATIVE CONTEXT

Eight iwi reside within the rohe of Te Tau Ihu o te Waka a Māui / top of the South Island<sup>31</sup>. They descend from the following waka: Tainui, Kurahaupo and Tokomaru. Te Tau Ihu iwi are Treaty partners with the Crown and work with Council to meet Treaty settlement obligations under the Deeds of Settlement for each iwi.

Te Tiriti o Waitangi/the Treaty of Waitangi is Aotearoa/New Zealand's founding document and comprises of the following clauses. The first article refers to iwi having tino-rangatiratanga over their territories. The second article refers to iwi having full exclusive and undisturbed possession of their lands and estates, forests, fisheries and other taonga. The third article refers to protection of iwi

and the partnership of both Pākehā and Māori. There have been various principles and interpretations of Te Tiriti but it is important to note that the articles of the Treaty lay the foundation for the Treaty partnership.

The Treaty Settlements process was established to allow for Māori claimant groups, in this case Te Tau Ihu iwi, to settle historical claims against the Crown. Treaty Settlements are made up of the following forms of redress:

- 1) Historical Account, Acknowledgement and Crown Apology;
- 2) Cultural Redress; and
- 3) Financial and Commercial Redress.

In 2014, legislation was passed to provide a Deed of Settlement Bill by Parliament, which implements all Deeds of Settlement for Te Tau Ihu iwi. The claimants accept that the settlements are fair and final in relation to settling historical claims. The Treaty Settlements process therefore provides a platform for Te Tau Ihu iwi to build a relationship with the Crown and Local authorities based on the following:

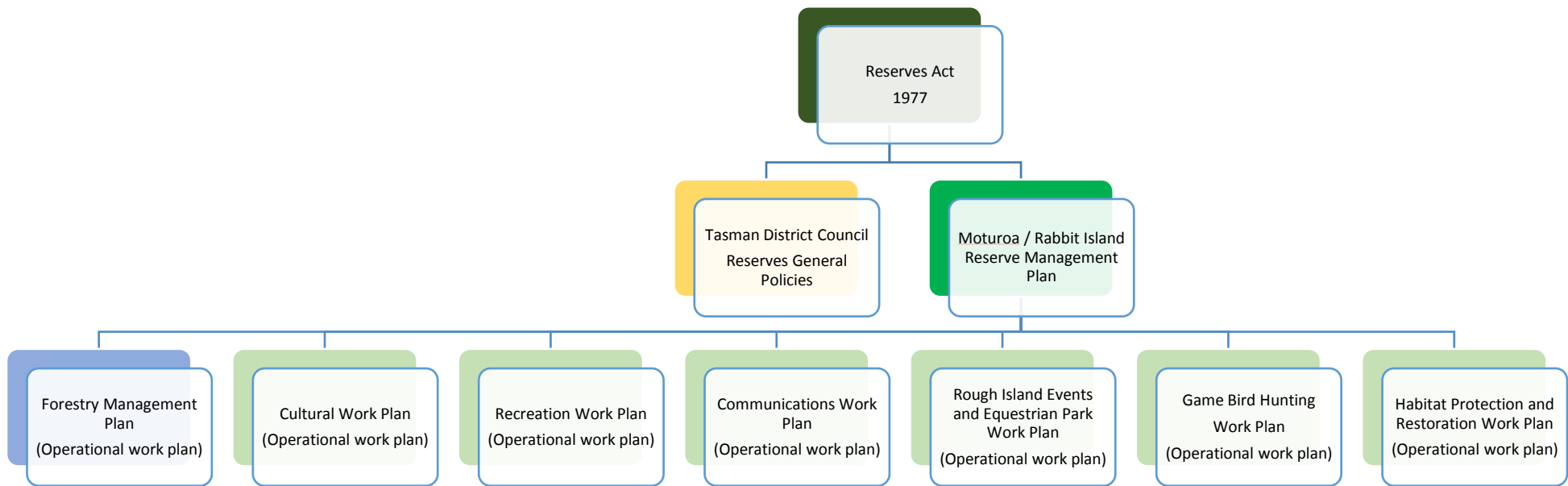
- 1) The tribal right to self-regulation;
- 2) The right of redress for past breaches; and
- 3) The duty to consult.

There are also additions to this, defined in the Court of Appeal and the Waitangi Tribunal. The first principle, 'partnership', obliges both parties 'to act reasonably, honourably and in good faith'. The second principle, 'active protection', requires the Crown to protect Māori in the use of their lands and waters. Under these principles, Council has an obligation to consult with Te Tau Ihu iwi<sup>32</sup>.

As the administering body for the reserves on the three Islands, Council is committed to developing a durable Treaty partnership based on good will, good faith and active protection.

<sup>31</sup> The south-eastern part of Tasman District (i.e. the area south of a line between Kahurangi Point and Nelson Lakes) lies within the takiwā (tribal area) of Ngāi Tahu iwi. However, their takiwā does not extend as far north as the Islands.

<sup>32</sup> Kingi T. (2016). Aotūroa Framework, Section 3: Te Tau Ihu Iwi Whakamahere Wakatū. Karewarewa Innovations Consultancy.



*Figure 10: Relationship between Moturoa / Rabbit Island Reserve Management Plan, the Reserves Act, Council’s Reserves General Policies document and operational work plans<sup>33</sup>.*

*Note that many of the operational work plans have yet to be developed (see Part 2, Section 7 of this Plan).*

<sup>33</sup> In addition to the operational work plans identified in Figure 10, the Nelson Regional Sewerage Business Unit (NRSBU) has also produced a Biosolids Management Plan. The NRSBU holds a resource consent to apply biosolids to Moturoa/Rabbit Island (see Part 2, Section 4.2 of this Plan for further details).



## Māori History of the Islands

Moturoa/Rabbit Island and adjacent Rough and Bird Islands have an extensive and rich Māori history. The Waimea/Waimeha Inlet provided fertile plains, wetlands, estuarine and freshwater ecosystems and with that, an abundance of resources. Moturoa/Rabbit Island was an extensive occupation site for Māori with fishing villages and waka landing sites (Mitchell, 2004)<sup>34</sup>. Significant settlements existed at various times beside the Waimea/Waimeha River, on the Waimea/Waimeha plains and on the Islands of Waimea/Waimeha Inlet. The Waimea/Waimeha area had a large pā located at the current site of Appleby School.

Historians outline that Rakaihautu (a Waitaha chief) was the earliest explorer from Hawaiiki to the South Island, who occupied Nelson Haven and later moved further south towards Bluff<sup>35</sup>. The earliest hapū and iwi groups to occupy the Islands and Waimea/Waimeha, and to populate the northern South Island, were Waitaha, Rapuwai, Ngāti Wairangi, Ngāi Tara ki te Ra To and Ngāti Tūmatakokiri (1400-1600A.D) and later Ngāti Apa and Ngāti Kuia of Kurahaupo waka.

Supporting iwi oral traditions, archaeological evidence and records show different waves of occupation of Moturoa/Rabbit Island and Waimea/Waimeha Plains. These include archaeological evidence of personal ornaments of Pacific Polynesian designs, which were typical of the Waitaha and Rapuwai occupation period. Carbon dating has revealed early evidence of modified soils (Waimea gardens) that have been dated as early as the 14<sup>th</sup> century. The soils included tonnes of ash, sand and gravels which accumulated over the years and have been associated to the early Waitaha and Rapuwai groups, and more recently the Ngāti Kuia people. These gardens have been identified as one of the country's largest horticultural/agricultural enterprises of the entire Pre-European period<sup>36</sup>.

In the 1820's, during the Hekenga/migrations, Ngāti Kōata entered into a tuku agreement with Kurahaupo iwi, settling in areas including Rangitoto, Raetihi, Wakapuaka and Whakatū. Soon after, Te Rauparaha of Ngāti Toa Rangatira and the allied tribes of Ngāti Rārua, Ngāti Tama and Te Ātiawa arrived in Te Tau Ihu. Ngāti Tama established in Wakapuaka and Onetahua, Golden Bay/Mohua, while Ngāti Rārua and Te Ātiawa established in the Motueka and Riwaka<sup>37</sup> area. Ngāti Toa utilised the area for seasonal

occupation and migratory routes. Ngāti Apa and Ngāti Kuia remained in more confined areas of Te Tau Ihu.

As a result of the hekenga/migrations, there was a variety of movement and settlement of iwi around Moturoa/Rabbit Island, the Waimea/Waimeha plains and the wider Moutere area. The iwi who are kaitiaki of Moturoa/Rabbit Island and Waimea/Waimeha are Ngāti Rārua, Ngāti Koata, Ngāti Tama, Te Ātiawa, Ngāti Kuia, Ngāti Apa ki te Rā Tō, Ngāti Toa Rangatira and Rangitāne o Wairau.

The recent Settlement Acts and related Deeds provide a contemporary space which recognises and redresses historical grievances (pre 1992) as a result of actions/inactions by the Crown. These have been addressed through financial, commercial and cultural redress. Crown Acknowledgement of historical claims provides an interesting dynamic around identifying the manawhenua status of a particular geographical area. It is important to note that Manawhenua is a Māori concept and construct that is owned and determined by hapū and iwi. The Settlement Acts also provide a legal framework for local authorities to acknowledge areas of significance to Te Tau Ihu iwi<sup>38</sup>. The Acts also include obligations to build new relationships with iwi that are based on mutual trust, co-operation, and respect for the Treaty of Waitangi and its principles.

<sup>34</sup> Mitchell H. & M.J. (2004). History of Māori of Nelson and Marlborough. *Volume 1 of Te Tau Ihu o te Waka: Te Tāngata me te Whenua – The People and the Land*. Huia Publishers, Wellington, NZ.

<sup>35</sup> Mitchell Research (1994). *Proposed Disposal of Biosolids to Rabbit Island, Nelson*. Gibault Upgrades, Responses of Iwi representatives.

<sup>36</sup> Mitchell Research (1994). *Proposed Disposal of Biosolids to Rabbit Island, Nelson*. Gibault Upgrades, Responses of Iwi representatives.

<sup>37</sup> As a result of the 2014 Treaty Settlements, the altered official geographic name 'Riwaka River' replaces the former geographic name 'Riwaka River'.

<sup>38</sup> See <http://nelson.govt.nz/assets/Environment/Downloads/TeTauIhu-StatutoryAcknowledgements.pdf>

## Past & Present Day Use of the Islands

Although originally reserved for gravel and quarantine purposes in the mid to late 1800's, the Islands have been used for recreational activities since the 1850s. Access was via the Inlet until more recent times, when causeways connected the Islands to the mainland. Historical recreational use included pleasure boating, game hunting, picnicking, camping and horse racing. Henry Redwood (the founder of horse racing in New Zealand) exercised and trained racehorses on the front beach of Moturoa/Rabbit Island and on the hard sand area located immediately south of Tic Toc Road on Rough Island (this area is now a wetland). The name 'Tic Toc' is thought to be derived from the sound of horses galloping along this stretch of sand.

A few acres of land on Moturoa/Rabbit Island were rented to a local farmer for grazing at the turn of the 20<sup>th</sup> century. Around this time, Council's records indicate that people illegally collected firewood and manuka stakes from the Islands and built small baches and fishing shacks near the coastal margins. In 1910, the whole of Moturoa/Rabbit Island was declared to be a recreation reserve: the Rabbit Island Domain. By 1921, much of the land on Moturoa/Rabbit and Rough Islands was reserved for plantation purposes and vested in the Waimea County Council for management, although an area adjacent to the front (northern) beach on Moturoa/Rabbit Island was retained as a recreation reserve. Today this area is known colloquially as 'the Old Domain'.

### Recreation

Council's policy, restricting commercial use of the Recreation Reserve, has ensured that the Islands have not been greatly disturbed by development. Today the Recreation Reserve areas retain a feeling of naturalness and/or open space. Several areas are maintained as mown grassed areas, interspersed with shade trees and shelterbelts. The picnic areas contain picnic tables and barbecues – a few of these are covered. Several outdoor arenas, yards and an equestrian cross-country course have been developed in the Rough Island events and equestrian park. Other areas, such as Bird Island and the Hunter Brown picnic area on Rough Island, provide refuge for remnant native vegetation. Rough Island is a designated dog exercise area. There are two access points for launching boats: one on Rough Island and one on Moturoa/Rabbit Island. Existing recreational amenities are shown on Figure 11.

### Infrastructure

Ken Beck Drive and many of the roads behind the central part of the front beach on Moturoa/Rabbit Island are sealed, while other roads are gravel. The only buildings on the Islands are two caretakers' houses and a works depot, three clubrooms/storage buildings at the Rough Island

events and equestrian park, three changing blocks and several toilets. Underground sewage and water mains run across Moturoa/Rabbit Island to Mapua, while other underground water pipes service the Reserve. Electric power is connected to the works depot and the caretakers' residences. An underground power line services a telecommunications tower at the eastern end of Moturoa/Rabbit Island. To slow erosion of the foredune, sand push-ups have been undertaken along the front beach at Moturoa/Rabbit Island in recent years.

### Forestry

Pine plantations were established on Moturoa/Rabbit and Rough Islands during the 1920's and 1930's. This commercial forestry activity continues to the present day (see Part 2, Section 4.1). A network of forestry blocks has been established, each of which is planted out and harvested on a rotational basis of approximately 25-30 years. Operational management of the forest plantation areas is currently contracted to PF Olsen Ltd (the contract expires in June 2023), who manage all of Council's forestry assets. In this Plan, the forestry contractor is referred to as the Forest Manager.

Council has previously authorised the establishment of pine plantations on some areas classified as Recreation Reserve, including the coastal margins of Moturoa/Rabbit Island (see Figure 1). These areas are being managed as production plantations until such time that they are required for recreation purposes. Some of these areas have either recently been harvested, or are due to be harvested in the near future. Future use of these areas of recreation reserve is discussed in Part 2, Section 1.1 of this Plan.

### Biosolids

The Nelson Regional Sewerage Business Unit (NRSBU) holds a land use consent and discharge consent for the disposal of biosolids on Moturoa/Rabbit Island. The discharge permit expires in October 2020. Biosolids from the wastewater treatment plant on Bell Island have been applied to 750 ha of *Pinus radiata* plantation at Moturoa/Rabbit and Bell Islands since 1996, with repeat applications made approximately every three years. Biosolids are transferred to a storage tank on Bell Island, before being pumped across the Waimea/Waimeha Inlet to holding tanks on Moturoa/Rabbit Island. Tankers transport biosolids to the forest, where they are sprayed under the tree canopy as fertiliser. Current and future management of biosolids is discussed in more detail in Part 2, Section 4.2 of this Plan.

### Other resource consents

Resource consents for activities on the three Islands are recorded in Appendix 3 of this Plan.



Figure 11: Existing recreational amenities on the Islands<sup>39</sup>

<sup>39</sup> Roads, tracks and trails are shown on Figure 2.

## History of Land Tenure

The history of land tenure since 1854, when the Crown first acquired Moturoa/Rabbit Island, is described in detail in Appendix 4. A brief timeline of key dates is presented on this page.

- 1854 Rabbit Island reserved for the purposes of quarantine-ground, under the Public Reserves Act 1854.
- 1869 Eastern end of Rabbit Island reserved as a gravel reserve, under the Nelson Waste Lands Act 1863.
- 1869 Eastern part of Rough Island reserved for gravel purposes as a Quarry Reserve.
- 1876 Western part of Rough Island reserved for the purposes of public utility.
- 1909 Rabbit Island was appropriated for a public recreation-ground, under the Public Reserves and Domains Act 1908.
- 1910 All land on Rabbit Island declared to be the Rabbit Island Domain. Nine people appointed to the Rabbit Island Domain Board to control the domain.



Plan of Islands drawn by JJ Ledger, surveyor, 11/8/1919

- 1920 The purpose of reservation of Rough Island was changed from gravel and public utility to plantation.
- The purpose of reservation of a large part of Rabbit Island (909 ha) was changed from recreation to plantation (148 ha remained as Rabbit Island Domain).
- 1921 The plantation reserve areas on Rabbit Island and Rough Island were vested in the Chairman, Councillors and Inhabitants of the County of Waimea, in trust (and subject to conditions), for plantation purposes, under the Reserves and other Lands Disposal and Public Bodies Empowering Act 1920.
- 1926 Nine people appointed to the Rabbit Island Domain Board to control the domain.
- 1930 A new public road (now known as Ken Beck Drive) was legalised to cross Rough and Rabbit Islands.
- 1933 Control of the recreation reserve was passed to Waimea County Council as Rabbit Island Domain Board.
- 1944 Bird Island was added to the Rabbit Island Domain.
- 1960 The purpose of part of the plantation reserve areas on Rabbit and Rough Island (107 ha) was changed from plantation purposes to recreation purposes and added to the Rabbit Island Domain, under Reserves and Domains Act 1953.
- 1979 The Waimea County Council Empowering Act 1979 came into effect.
- 1989 Waimea County Council was incorporated into Tasman District Council.
- 2015 Tasman District Council classified the reserves on the three Islands, under the Reserves Act 1977 and a delegated authority from the Minister of Conservation. Reserve areas are classified as either Recreation Reserve (239 ha) or Local Purpose (Plantation) Reserve (968 ha).

# PART 4

## Glossary, Appendices & References



*Photo: Ali Kimber*

## Ngā Tikanga O Ngā Kupu Māori – Māori Glossary

Kupu Māori	Kupu Pākehā/English translation
Āhikaa-roa	Title to land through long term occupation
Aotearoa	New Zealand
Awa	River, stream
Hapū	(noun) Tribe, subtribe, clan, kinship group
Harakeke	Flax
Hauhou	Red knot
Hawaiiki	The traditional Māori place of origin
Hekenga	Migrations
Inanga	Whitebait
Iwi	In this Plan, the term 'iwi' means the eight Te Tau Ihu iwi: Ngāti Apa, Ngāti Kōata, Ngāti Kuia, Ngāti Rārua, Ngāti Tama, Ngāti Toa, Rangitāne and Te Ātiawa
Kahikatea	<i>Dacrycarpus dacrydioides</i>
Kai	1. (verb) To eat, consume, feed oneself, patake, devour 2. (noun) Food, meal
Kaitiaki	Trustee, minder, guard, custodian, guardian, keeper
Kaitiakitanga	Guardianship, stewardship, trustee
Kaka	Native parrot
Kākahu	Cloak
Kanuka	<i>Kunzea ericoides</i>
Karuhiruhi	Pied shag
Kawaupaka	Little shag
Kereru	Native pigeon
Kete	Flax baskets
Koaro	Native freshwater fish species
Kōiwi	Human remains
Kokopu	Native freshwater fish species
Kotuku	White heron
Kotukungutupapa	Royal spoonbill
Koura	Freshwater crayfish
Kuaka	Eastern bar-tailed godwit
Kūtai	Shellfish species
Māhinga	Place where work is done, activity, garden, fishery
Māhinga kai	Food gathering places
Mako	Shark
Mana	Prestige, authority, influence

Kupu Māori	Kupu Pākehā/English translation
Mānaakitanga, mānaaki	Hospitality, kindness
Manawhenua	Authority over land
Manuhiri	Visitors
Manuka	<i>Leptospermum scoparium</i>
Matai	<i>Prumnopitys taxifolia</i>
Mātauranga	Knowledge, wisdom, understanding, skill, education
Mātauranga Māori	Māori knowledge – the body of knowledge originating from Māori worldview
Mauri	Life principle, essence of all living things
Moturoa	Long island
Muka	Prepared flax fibre
Ngā	Plural
Ngā Mara Harakeke	Flax gardens
Ngā taonga tuku iho	Treasures inherited from the ancestors
Ngutuparore	Wrybill
Pā	Fortified village, fort
Pātiki	Flounder
Pipi	Shellfish species
Poaka	Pig
Poupou	Post, pole, pillar
Pounamu	Greenstone, nephrite, jade
Rangatira	Chief (male or female), chieftain, chieftainess
Rāranga	Weaving
Rohe	Boundary, district, region, territory, area, border (of land)
Rongoā	Māori herbal medicine, remedy, cure, treatment, tonic
Takiwā	Tribal area, district, territory, vicinity, region
Tāmure	Snapper
Tāngata whenua	Local people, hosts, indigenous people of the land - people born of the whenua, i.e. of the placenta and of the land where the people's ancestors have lived and where their placenta are buried
Tāniko	A uniquely Māori variation of twining, used to weave the colourful, intricate borders of cloaks
Taonga	Treasure, anything prized – applied to anything considered of value
Taonga tuku iho	Heirloom, something handed down, cultural property, heritage
Tapu	Be sacred, prohibited, restricted, set apart, forbidden, under atua protection
Te Ao Māori	The Māori world view
Te Tai-ō-Aorere	The Tasman Bay
Te Tau Ihu o te Waka ā Māui	The top of the South Island

Kupu Māori	Kupu Pākehā/English translation
Te Tiriti ō Waitangi	The Treaty of Waitangi (Māori version)
Ti kouka	Cabbage tree
Tikanga	Protocol, correct procedure, custom
Tino rangatiratanga	Self-determination, autonomy
Tio	Shellfish species
Torea-pango	Variable oystercatcher
Tōtara	A native tree species
Tuangi	Shellfish species
Tuatua	Shellfish species
Tuna	Eel
Tūpuna	Ancestors
Tuturiwhatu	Banded dotterel
Urupā	Burial ground
Wāhi tapu	Sacred place
Wai	Water
Waimeha	Waimea (inlet, river, catchment)
Wairua	Spirit
Waka	Canoe
Weka	Native flightless bird
Whakataukī	Proverb, saying
Whakapapa	Genealogy, genealogical table, lineage, descent
Whānau	Family
Whariki	Mat
Whenua	1. Land – often used in the plural, ground, country, nation, state 2. Placenta, afterbirth





## Abbreviations & Definitions of Terms

Barrier island	A long, relatively narrow island running parallel to the mainland, built up by the action of waves and currents and serving to protect the coast from erosion by surf and tidal surges. The three Islands covered by this plan together form a barrier between the estuarine waters of the Waimea/Waimeha Inlet and the open sea of Tasman Bay/Te Tai-o-Aorere.
Bell Island Wastewater Treatment Plant	The Bell Island Wastewater Treatment Plant serves the communities of Nelson South, Richmond and Mapua. Treated effluent is discharged into the Waimea/Waimeha Inlet on the outgoing tide. Stabilised sludge (biosolids) is applied to forests on Moturoa/Rabbit Island. The treatment plant consists of an aeration basin, clarifier, Dissolved Air Flotation System (DAF) and an autothermal thermophilic aerobic digestion (ATAD) plant that treats captured solids to produce biosolids. A system of pumps and pipework transfers biosolids to Moturoa/Rabbit Island. The oxidation pond system of Bell Island consists of three facultative ponds in parallel and two maturation ponds in series. Effluent from the last maturation pond is discharged into the Waimea/Waimeha Inlet via an outfall pipeline and diffusers. The treatment plant treats sewage equivalent to that generated by a domestic population of around 133,000 people. Peak flows and loads are highly variable due to the combined effects of stormwater infiltration and the seasonal nature of industrial food processing activities.
Biodiversity	The variability among living organisms from all sources including, among other things, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems (Article 2 of the Convention on Biological Diversity)
Biosolids	Biosolids are sewage sludges that have been treated so they are suitable for beneficial use. Sludge from the Bell Island Wastewater Treatment Plan is stabilised in the two stage Autothermal Thermophilic Aerobic Digestion (ATAD) process. The ATAD process uses heat released by microbial activity to achieve and sustain minimum operating temperatures of 35°C and 55°C respectively to produce pasturised biosolids (Class A Biosolids). The resultant “biosolids” are transferred to a storage tank before being pumped across the Waimea/Waimeha Inlet to holding tanks on Moturoa/Rabbit Island. Tankers transport biosolids to the forest, where they are sprayed under the trees as fertiliser.
Council	Tasman District Council
DOC	Department of Conservation
MHWS	Mean High Water Springs
NZCPS	New Zealand Coastal Policy Statement 2010
Operational Work Plan	Operational Work Plans list actions or tasks which are required to implement the Reserve Management Plan. The work plans will be updated annually, so that actions for the year can be matched to annual budgets.
RMA	Resource Management Act 1991
Reserves	Reserves classified under the Reserves Act 1977 have a specific legal definition.
Sand push-up	Sand push-ups are designed to slow coastal erosion of dune systems. Typically, bulldozers or diggers are used to move sand from the lower beach up in front of the remaining dune. The sand is usually sculptured to resemble the natural dune shape.
TDC	Tasman District Council
Treaty principles	The principles of the Treaty of Waitangi, identified from time to time by the Government of New Zealand.
TRMP	Tasman Resource Management Plan

## Appendices

### APPENDIX 1: ACCIDENTAL DISCOVERY PROTOCOL FOR MOTUROA/RABBIT, ROUGH AND BIRD ISLANDS

There is a high risk of accidental discovery occurring on Moturoa/Rabbit, Rough and Bird Islands. An accidental find is when taonga, kōiwi or wāhi tapu are revealed (e.g. through earthworks or erosion) and an archaeological authority has not been obtained under the Heritage New Zealand Pouhere Taonga Act 2014. Where there is an archaeological authority, it will provide for the discovery of taonga, kōiwi or wāhi tapu and take precedence over the protocol in this appendix.

Iwi consider the Islands to be designated as a cultural precinct, recognising the three Islands as a discovery 'hotspot'. Iwi do not support activities that require earthworks – due to the threat to, and risk of damage of, both taonga and wāhi tapu sites.

In the event of an accidental discovery, the following protocols will be implemented. These protocols aim to mitigate any damage to and/or fossicking of wāhi tapu, taonga and kōiwi on Moturoa/Rabbit, Rough or Bird Islands. Adequate measures must be taken to avoid discoveries or destruction of cultural sites.

#### Taonga Discovery Protocol

Taonga or 'ngā taonga tuku iho' (gifts handed down from the ancestors) are recognised, but not exclusive to, physical tangible heritage places that can be described as those land-based places created, formed or shaped by earlier inhabitants or tūpuna<sup>40</sup>. These can be archaeological sites such as urupā (burials), pā, hangi pits, terraces, oven stones, middens, stone/rock structures, rock art, waka, house sits, pounamu, modified soils, gardens, pakohe (argillite), fishing nets, sinkers, toki (artefacts), tools, weapons, Māori built heritage places such as marae buildings, whareniui (carved meeting house), pataka (food storage house), whare (house), post holes from remnant whare, occupation sites, carvings, artworks, and other structures such as waharoa (gateways) and various other taonga.

Taonga also reflects natural heritage sites such as natural features, with traditional activities (e.g. springs, trees, swamp, caves) or a hapū and iwi landmark (e.g. mountain, river, lands, sea/lake, village, taonga species, pā harakeke (flax harvesting area) where no human activity is evident.

Taonga also includes intangible heritage places where no visible feature or evidence is present but where a significant event or traditional activity may have occurred such as a battlefield, waka landing sites, places of meeting, of learning, of ritual, fishing grounds, taniwha den to name a few.

Various traditional activities have taken place on the Islands. There is evidence of occupation, warfare, burials, marakai (gardens), large māhinga kai sites where natural resources and kai species were harvested, an extensive waka landing site, and other taonga have been found.

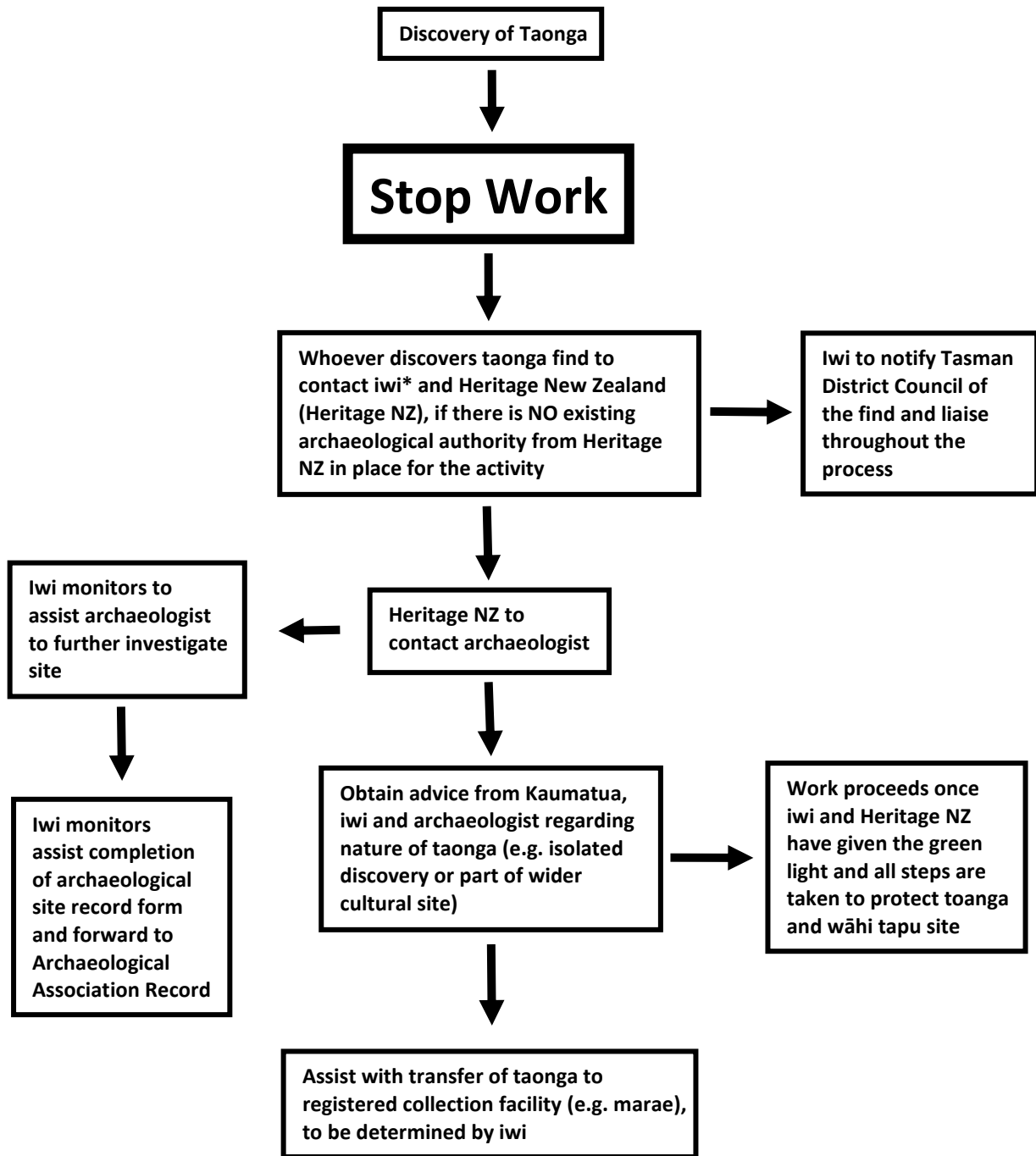
The diagram on the following page outlines the process to follow in the event of a taonga find on the Islands.

Note that, under the Protected Objects Act<sup>41</sup>, all taonga tūturu found are in the first instance (prima facie) Crown owned, to allow claims for ownership to be heard by the Māori Land Court.

<sup>40</sup>Heritage New Zealand - Pouhere Taonga website, retrieved from: <http://www.heritage.org.nz/protecting-heritage/maori-heritage>.

<sup>41</sup> Protected Objects Act: <http://www.mch.govt.nz/nz-identity-heritage/protected-objects/taongatuturu>

Process to follow in the event of any taonga find on the Islands:



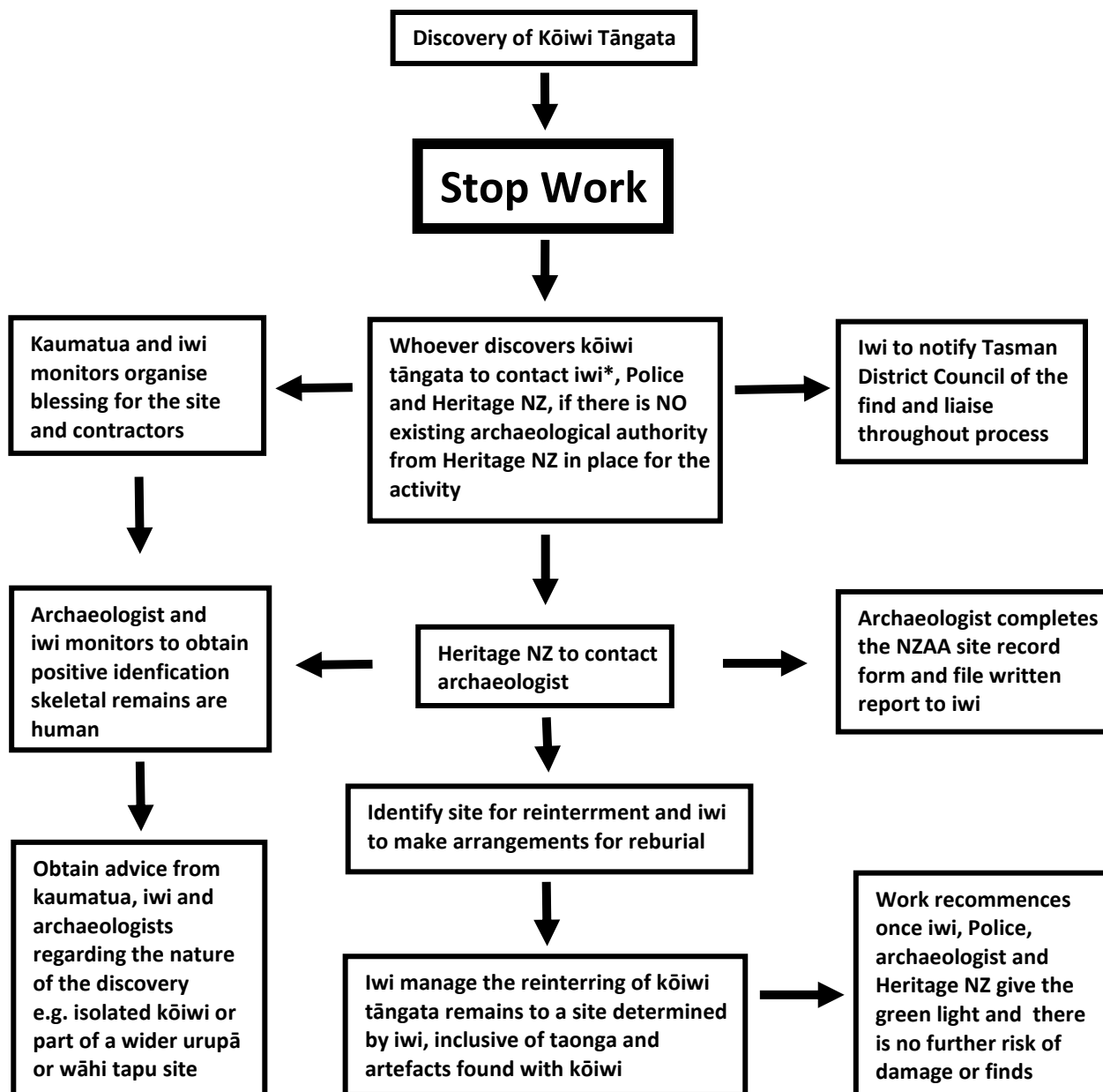
\* Note that the term 'iwi' means the eight Te Tau Ihu iwi authorities.

## Kōiwi Tāngata Discovery Protocol

Kōiwi tāngata are identified by iwi Māori as the remains of deceased tūpuna. Kōiwi tāngata is highly tapu, requiring particular tikanga to facilitate the management of such discoveries. Heritage New Zealand - Pouhere Taonga refer to kōiwi tāngata as human remains, particularly referring to bones that have not been made or incorporated into an artefact. 'Cultural items' refers to any taonga/artefacts discovered with the kōiwi tāngata/human remains. Kōiwi tāngata are not considered an artefact<sup>42</sup>. Taonga that is found with kōiwi tāngata must be reinterred with the kōiwi.

As the Islands have urupā onsite, there is potential for kōiwi tāngata to be revealed. The process to follow if this event occurs is outlined in the diagram below.

### Process to follow in the event of discovery of kōiwi tāngata on the Islands:



<sup>42</sup> Heritage New Zealand - Pouhere Taonga 'Guidelines for kōiwi tāngata/human remains', retrieved from: <http://www.heritage.org.nz/protecting-heritage/archaeology/archaeological-guidelines-and-templates>.

\* Note that the term 'iwi' means the eight Te Tau Ihu iwi authorities.

## APPENDIX 2: CONSISTENCY WITH OTHER COUNCIL STRATEGIES, MANAGEMENT PLANS & POLICIES

This reserve management plan needs to recognise and be consistent with other strategies, plans and policies that have been developed by Council in recent years, including the following:

### **Tasman District Council Reserves General Policies, September 2015**

<http://www.tasman.govt.nz/policy/plans/parks-and-reserves-management-plans/>

The Reserves General Policies document has been prepared to consolidate policies that apply to all reserves owned and/or administered by the Tasman District Council. This allows a consistent approach to reserve management and removes the need for policies to be repeated in omnibus or site-specific management plans. Reserve General Policies are policies that generally apply across all reserves, to avoid the need for them to be repeated in all reserve management plans. The policies in this Plan are site specific, to meet the specific needs of the Islands. These policies, therefore, supersede the Reserves General Policies where there are any inconsistencies.

### **Tasman District Council Open Space Strategy 2015-2025**

<http://www.tasman.govt.nz/policy/strategies/open-space-strategy-2015-2025/>

The intent of this Strategy is to help maximise the benefit the environment, residents and visitors gain from Council's investment in the District's open spaces – by responding to changes in demand resulting from population growth and age profiles, as well as seeking to better link existing areas of open space for improved ecological values and recreation access. The Strategy also aims to make the most of Council's relationships with other providers and managers of open spaces (such as the Department of Conservation and Ministry of Education) and the many volunteer agencies that work to protect and enhance our natural resources and improve access to recreation settings. The Strategy is a companion document to the Tasman District Council Reserves General Policies.

Management of the three Islands should contribute to achieving the Vision (section 6.1) and Desired Outcomes (section 6.2) of the Open Space Strategy. The reserve management plan should also give effect to Actions 18, 19 and 21-23 in section 7.3 (Natural Heritage); Action 27 in section 7.4 (Partnerships); Action 31 in section 7.5 (Landscape and Historic Heritage Values); and Action 32 in section 7.6 (Resilience).

### **The Waimea Inlet Management Strategy**

<http://www.tasman.govt.nz/policy/strategies/waimea-inlet-management-strategy/>

This Strategy brings together the communities of Tasman and Nelson and the many groups who have an interest in, and a commitment to, the Waimea/Waimeha Inlet and its sustainable future. It is an inter-agency strategy that includes the Tasman District and Nelson City councils, statutory agencies, non-statutory groups and organisations, businesses and residents. The Strategy is intended to guide the Council's decision-making across all departments, influencing not only statutory resource management but also provision of infrastructure, services and all areas of Council involvement.

The Strategy identifies issues and opportunities relating to the Inlet, provides a Vision for the Future<sup>43</sup>, and sets out a number of actions or matters to be addressed to achieve the Vision. The reserves on the three Islands covered by this plan should be managed in a way that helps to achieve the Vision and outcomes sought in the Waimea/Waimeha Inlet Management Strategy.

---

<sup>43</sup> Vision for Waimea Inlet: "A vibrant place, richly appreciated by the community for its open space, natural and ecological values; happily remembered by generations for their activities, adventures and discoveries; a place where tāngata whenua hold mana as kaitiaki of taonga; and a place to be shared with increasing respect."

## Tasman Resource Management Plan (TRMP)

<http://www.tasman.govt.nz/policy/plans/tasman-resource-management-plan/>

Figure 12 shows the location of Open Space, Recreation and Rural 2 TRMP Zones on the three Islands.



Figure 12: Tasman Resource Management Plan zones

The TRMP objectives for Reserves and Open Space are:

- Adequate area and distribution of a wide range of reserves and open spaces to maintain and enhance recreation, conservation, access and amenity values.
- Efficient and effective use of open space and reserves to meet community needs for recreation and amenity.
- The conservation of those areas in the District which have significant natural and scientific values such as landform, ecosystems, natural character and heritage values.
- The avoidance of significant adverse effects of activities and facilities on open space and recreational areas, and on the amenity values of surrounding areas.

Relevant TRMP objectives relating to the Rural 2 zoned land on Moturoa/Rabbit and Rough Islands include:

- Except where rural land is deferred for urban use, avoiding the loss of value for all rural land of existing and potential productive value to meet the needs of future generations, particularly land of high productive value.
- Retention of opportunities primarily for plant and animal production on land that has varying productive value, identified as the Rural 2 Zone.
- Avoidance, remedying or mitigation of the adverse effects of a wide range of existing and potential future activities, including effects on rural character and amenity values.

Zone rules are outlined in Chapter 17 of the Tasman Resource Management Plan. The existing use of the Local Purpose (Plantation) Reserve for forestry is compatible with the Rural 2 zoning.

### APPENDIX 3: REGISTER OF RESOURCE CONSENTS RELATING TO THE ISLANDS (AS AT SEPTEMBER 2016)

Table A: Resource consents that are currently effective

CONSENT No	APPLICANT	LOCATION	TYPE	USE	EFFECTIVE DATE	EXPIRY DATE
150416	TDC	Moturoa/ Rabbit Island	Land use disturbance	Undertake earthworks immediately above mean high water springs for the purpose of undertaking sand push ups.	27/05/15	27/05/2030
150415	TDC	Moturoa/ Rabbit Island	Coastal disturbance	Disturb the bed and temporarily occupy the Coastal Marine Area for the purpose of undertaking sand push ups.	27/05/15	27/05/2030
140475	TDC and Nelson Tasman Cycle Trust	Causeway between the islands	Coastal disturbance	Roads, cycle way, Rough to Rabbit Island Causeway : To occupy and disturb the coastal marine area in association with the construction of the reclamation.	4/07/14	4/07/2049
140474	TDC and Nelson Tasman Cycle Trust	Causeway between the islands	Coastal reclamation	Roads, cycle way, Rough to Rabbit Island Causeway : To reclaim approximately 96m <sup>2</sup> of coastal marine area for the construction of a cycleway adjoining the northern batter of.	4/07/14	na
120543	TDC	Moturoa/ Rabbit Island	Coastal disturbance	Coastal - Rabbit Island sand replenishment : Removal of 400m <sup>3</sup> of sand from Rabbit Island to facilitate shoreline remediation works.	19/07/12	19/07/2017
110346	Two Degrees Mobile Limited	Moturoa/ Rabbit Island	Land use	Establish maintain and operate two panel antennas and two microwave dishes on existing Vodafone mast.	26/05/11	na
100417	Equestrian Park Management Board	Rough Island	Land use	To erect a new building within the coastal environment area.	13/07/10	na
090013	Vodafone New Zealand Limited	Moturoa/ Rabbit Island	Land use	Upgrade an existing telecommunications facility at Rabbit Island.	16/02/09	na
060788	TDC	Moturoa/ Rabbit Island	Discharge to land	Discharge to land of secondary wastewater from Rabbit Island Recreation Reserve `western` toilet block.	17/09/2010	17/09/2025
060704	Nelson Western Riders Performance Club	Rough Island	Land use	Erect a building in the coastal environment area for club room and storage of equipment.	27/10/06	na
050862	Nelson Regional Sewerage Authority	Waimea Estuary, between Bell and Rabbit Islands	Coastal Occupation/ Structure	Occupy and disturb the coastal marine area to install an underground wastewater pipeline by way.	8/11/05	14/10/2040
050777	TDC	Moturoa/ Rabbit Island	Discharge to land	Disposal of secondary treated wastewater from toilet block at Moturoa/ Rabbit Island, Wastewater/Chemical Discharge - Sewerage Discharge.	17/09/2010	17/09/2025

CONSENT No	APPLICANT	LOCATION	TYPE	USE	EFFECTIVE DATE	EXPIRY DATE
010503	Tasman & Districts Equestrian Trust	Rough Island	Land use	Erect a clubroom and storage facility at Rough Island.	12/09/01	na
010297	Vodafone NZ Ltd	Moturoa/ Rabbit Island	Land use	Erect and operate one additional antenna on an existing telecommunications facility at Rabbit Island.	10/07/01	na
NN970265	TDC	Rough Island	Land use - disturbance	Install two fibreglass long drops at the equestrian centre.	17/11/97	18/11/2033
NN960339	TDC	Moturoa/ Rabbit Island	Land use - disturbance	To disturb the coastal area in order to install a fibre glass long drop.	4/02/97	5/02/2032
960298	TDC	Rough Island	Land use	Remove pine trees from archaeological site on Rough Island.	22/07/96	na
950036	Bell South New Zealand Ltd	Moturoa/ Rabbit Island	Land use	To establish a cellular telephone site on Rabbit Island.	28/03/95	na
NN940379V3	Nelson Regional Sewerage Authority	Moturoa/ Rabbit Island	Discharge - land	Discharge Biosolids to land (Forestry Blocks) at Rabbit Island.	15/01/09	10/10/2020
940534	Nelson Regional Sewerage Authority	Moturoa/ Rabbit Island	Land use	To use Rabbit Island for biosolids disposal.	23/08/96	na
940509	Fulton Hogan Construction Ltd	Rough Island	Land use	Removal of broom, gorse and radiate root/stump, stripping of contaminated gravel, removal of quality gravel.	22/08/97	na



**Table B: Resource consents that have been withdrawn, cancelled or expired**

CONSENT No	APPLICANT	LOCATION	TYPE	USE	STATUS	DATE
110768	TDC	Moturoa/ Rabbit Island	Land use disturbance	Excavating, stockpiling & removal of 400m <sup>3</sup> of sand from Rabbit Island.	Expired	26/10/11
070593	Nelson Regional Sewerage Authority	Rough Island	Discharge - Land	Discharge of biosolids to Rough Island.	Withdrawn	17/06/10
070384	Nelson Regional Sewerage Authority	Moturoa/ Rabbit Island and Rough Island	Land use	Increase the application of bio-solids to Rabbit Island and to apply bio-solids to Rough Island.	Withdrawn	17/06/10
050675	TDC	Moturoa/ Rabbit Island	Land use - disturbance	Rabbit Island, Richmond : realign a 300m section of roadway within the reserve which is under threat from coastal erosion.	Expired	1/12/05
050185	TDC	Moturoa/ Rabbit Island	Land use - disturbance	Modify an archaeological site while carrying out logging operations.	Expired	22/03/10
NN980324	TDC	Rough Island?	Coastal disturbance	Place rock in the river to prevent erosion of the river bank.	Expired	7/12/01
NN980121	Nelson Regional Sewerage Authority	Rough Island	Discharge - Air	Apply biosolids to forestry stands on Rough Island.	Cancelled	19/11/04
NN980098	Nelson Regional Sewerage Authority	Rough Island	Discharge - Land	Apply biosolids to forestry stands on Rough Island.	Cancelled	19/11/04
980089	Nelson Regional Sewerage Authority	Rough Island	Land use	Apply biosolids from the Nelson Regional Sewage Scheme to forestry stands on Rough Island.	Withdrawn	30/09/02
NN980017	Montgomery Watson	Moturoa/ Rabbit Island	Land use - bore	Construct five bores for installation of piezometers for groundwater monitoring.	Expired	15/01/99
NN970251	TDC	Channel between Mapua and Moturoa/ Rabbit Island	Coastal disturbance	To install two new pipelines to Mapua across the channel between Rabbit Island and Mapua wharf.	Expired	31/03/98
NN970240	TDC	Moturoa/ Rabbit Island	Coastal disturbance	To carry out beach replenishment works as a result of cyclone Drena.	Expired	31/08/13
NN960400	TDC	Moturoa/ Rabbit Island	Discharge - Land	To discharge effluent to land from toilet block.	Expired	2/12/06
NN960068	Nelson City Council	Moturoa/ Rabbit Island	Land use - bore	To install two piezometres tubes.	Expired	6/02/97

CONSENT No	APPLICANT	LOCATION	TYPE	USE	STATUS	DATE
NN950444	TDC	Channel between Mapua and Moturoa/ Rabbit Island	Coastal disturbance	To install two new pipelines to Mapua across the channel between Rabbit Island and Mapua wharf.	Expired	31/12/96
NN950395	TDC	Moturoa/ Rabbit Island	Discharge - Water	Disposal of effluent from toilet block at Rabbit Island.	Expired	27/11/05
NN950373	TDC	Channel between Mapua and Moturoa/ Rabbit Island	Coastal disturbance	To install two new pipelines to Mapua across the channel between Rabbit Island and Mapua wharf.	Expired	31/12/96
NN950316	TDC	Channel between Mapua and Moturoa/ Rabbit Island	Coastal occupation/ structure	To undertake inspection of the sewer and water pipes across the channel between Rabbit Island and Mapua.	Expired	31/03/96
NN950263	Weingut Seifried Ltd	Moturoa/ Rabbit Island	Land use – gravel extraction	To take gravel from Rabbit Island bank.	Withdrawn	12/09/95
NN950193	Equestrian Society	Rough Island	Land use - bore	To drill an investigation bore and is groundwater quality acceptable to take for irrigation.	Expired	12/06/96
NN950136	Beca Steven	Moturoa/ Rabbit Island	Land use - bore	Drilling of four bores for installation of piezometers for groundwater monitoring purposes.	Expired	19/04/96
NN950032	Waimea Drilling Company Ltd	Moturoa/ Rabbit Island	Land use - bore	To construct an investigation bore.	Expired	31/01/96
NN940379V2	Nelson Regional Sewerage Authority	Moturoa/ Rabbit Island	Discharge - land	Variation to discharge biosolids to land.	Cancelled	23/12/08
NN940379V1	Nelson Regional Sewerage Authority	Moturoa/ Rabbit Island	Discharge - land	Variation to increase discharge application rates of biosolids to land.	Cancelled	15/01/09
NN930081	Aggregate Supplies Ltd	Rough Island	Coastal disturbance	Mapua branch between end of left bank and Rough Island: To use a portion of the coastal marine area for temporary access to remove stockpile of gravel at Rough Island.	Expired	19/03/95

## APPENDIX 4: HISTORY OF LAND TENURE – MOTUROA/RABBIT, ROUGH & BIRD ISLANDS

The history of land tenure at Moturoa/Rabbit, Rough and Bird Islands is complex<sup>44</sup>.

Moturoa/Rabbit Island was initially reserved by the Crown in 1854 for the purposes of quarantine-ground. In 1909, the entire island was appropriated by the Governor of New Zealand for a public recreation-ground. In 1920, much of the island (2,245 acres) was reserved for plantation purposes. The remainder of the land on Moturoa/Rabbit Island (355 acres) retained its status as a public recreation-ground (the Rabbit Island Domain). Land now known as Ken Beck Drive was legalised as a public road in 1930. Land was added to the recreation reserve in 1960, including a strip of land encompassing Barnicoat Road. The extent of the front beach recreation reserve area was also increased at this time.

Rough Island was initially reserved by the Crown for gravel purposes in 1869, with 120 acres set aside for public utility purposes in 1876. In 1920 the entire island was reserved for plantation purposes, but in 1960 the western portion of the island was added to the Rabbit Island Domain/recreation reserve.

On 24 February 1944, Bird Island was acquired by the Crown and added to the Rabbit Island Domain/recreation reserve, after the first European owner (Mr Bird) returned to England and could not be located.

In 1910, the Governor of New Zealand appointed nine persons to the Rabbit Island Domain Board (recreation reserve) to control the domain. Control of the domain was later passed to Waimea County Council, with their appointment as the Rabbit Island Domain Board taking place on 21 August 1933. Waimea County Council was incorporated into Tasman District Council in 1989.

In 1921 the Governor-General vested all land at Rough Island and 2,245 acres of land at Moturoa/Rabbit Island in the Chairman, Councillors and Inhabitants of the County of Waimea, in trust (and subject to conditions) for plantation purposes, under sections 114 and 115 of the Reserves and other Lands Disposal and Public Bodies Empowering Act 1920. The conditions included:

- 1) Waimea County Council must prepare a general forest working plan and annual or periodic planting plan, to be approved by the Commissioner of State Forests prior to planting;
- 2) State Forest Service has free access to the reserve at all times; and

- 3) Council to pay State Forest Service all expenses incurred in meeting these conditions.

On 3 October 1960, the Minister of Lands cancelled the vesting in the Chairman, Councillors and Inhabitants of the County of Waimea of part of the plantation reserve (a total of 264 acres of land on Moturoa/Rabbit and Rough Islands) and changed the purposes of those areas of land to a reserve for recreation purposes, under Reserves and Domains Act 1953. The Minister also declared the recreation reserve to be a public domain subject to Part III of that Act, to form part of the Rabbit Island Domain and be administered as a public domain by the Domain Board.

On 7 September 1979, the 'Waimea County Council Empowering Act 1979' came into effect. This Act confirmed that the Waimea County Council was the administering body of the reserves held for plantation and recreation purposes on Moturoa/Rabbit, Rough and Bird Islands. It also confirmed that the areas on Moturoa/Rabbit and Rough Island reserved for plantation purposes: "are, by virtue of sections 114 and 115 of the Reserves and Other Lands Disposal and Public Bodies Empowering Act 1920 and Orders in Council published in the Gazette on 25 August 1921, vested in the Council in trust for plantation purposes subject to certain conditions contained in the said Orders in Council."

The 1979 Act authorised the Waimea County Council to expend the proceeds of afforestation activities on certain reserve land and to validate certain earlier expenditure. This Act requires Council to apply 10% of the net profit from the sales of forest products and associated activities of the Council conducted on Moturoa/Rabbit and Rough Islands in each financial year, or such greater proportion of it as it considers necessary, for the purposes of adequate maintenance and improvement of the reserves on the three Islands for recreational purposes, or for the purposes set out in section 80 of the Reserves Act 1977. The remainder of the profits may be transferred to the general funds of Council and used for the general purposes of Council.

In 1989 the Waimea County Council was incorporated into Tasman District Council.

In 2015, reserves on the three Islands were classified under the Reserves Act 1977 (239 ha as Recreation Reserve and 968 ha as Local Purpose (Plantation) Reserve)<sup>45</sup>. Notice of

<sup>44</sup> For information on changes to legislation see: 'Reserves and Domains – A Summary of Legislation' compiled by P.V. Hughes, MNZIS: [www.recreationaccess.org.nz/files/hughes\\_p\\_v\\_reserves.pdf](http://www.recreationaccess.org.nz/files/hughes_p_v_reserves.pdf)

<sup>45</sup> Note that, prior to 2013, the Minister of Conservation was responsible for classifying all reserves that existed before 1977 (s.16(1)(a)). In 2013,

the reserve classification was published in the New Zealand Gazette, No. 117, on 29 October 2015.

In summary, the reserves on the three Islands were derived from the Crown, who vested the reserves in trust in the Waimea County Council. Tasman District Council has inherited its role as administering body for the reserves from the Waimea County Council. The reserves are vested in Council for the purposes of the Reserves Act 1977, but if

the reservation over all or part of the reserves was revoked the land would revert to the Crown.

Further details about the history of land tenure on the three Islands is provided in the following table.



---

the Minister of Conservation delegated this responsibility to local authorities (for those reserves vested in Council).

YEAR	LOCATION	AREA OF LAND	CHANGE TO LAND STATUS/MANAGEMENT	MECHANISM	REFERENCE	AREA DELINEATED ON PLAN MARKED
1854	Rabbit Island	Entire island (2,600 acres approx)	Reserved for the purposes of quarantine-ground under the authority of 'The Public Reserves Act 1854'. Land was not vested in trust in any society, body corporate or Trustees at this time.	By notice of the Superintendent of the Province of Nelson, published in the Nelson Provincial Gazette on 9 November 1854	No. 15	Map of Waimea District drawn by A McKellar Wix August 1897. T Humphries, Chief Surveyor, Nelson.
1869	Portion of Rabbit Island (Island numbered 5, Waimea East District)	100 acres approx at the eastern end of the island	Reserved on 21 May 1869 by the Waste Lands Board as a gravel reserve under the authority of 'The Nelson Waste Lands Act 1863'. Section 12 of this Act confers the power to change the purpose of the reserve made under 'The Public Reserves Act 1854' on three months' notice being given in the Gazette and in some newspaper circulating in the Province. Land was not vested in trust in any society, body corporate or Trustees at this time.	Notice published in the Nelson Provincial Gazette on 29 May 1869	No. 23	Map of Waimea District drawn by A McKellar Wix August 1897. T Humphries, Chief Surveyor, Nelson.
1869	Eastern portion of Rough Island (Island numbered 3, Waimea East District)	230 acres approx	Permanently reserved for gravel purposes as a Quarry Reserve.	Notice published in the Nelson Provincial Gazette on 29 May 1869	No. 23	Map of Waimea District drawn by A McKellar Wix August 1897. T Humphries, Chief Surveyor, Nelson.
1876	Western portion of Rough Island	120 acres approx	Permanently reserved for the purposes of public utility.	Notice published in the Nelson Provincial Gazette on 30 June 1876		
1895	Portion of Rabbit Island	20 acres approx	Lease to Mr Henry Redwood under temporary occupation license for an annual rental. This license was terminated by the Land Board on 31 December 1907.	Temporary occupation license, effective 1 January 1985 to 31 December 1907.		
1909	Rabbit Island	Entire island (2,600 acres approx)	Rabbit Island was appropriated by the Governor of NZ for a public recreation-ground, under section 11 of the Public Reserves and Domains Act 1908. The public recreation-ground was a reserve within Class III of that Act.	By warrant published in the New Zealand Gazette on 16 December 1909. The new land status took effect on 22 December 1909.	No.107, pg 3312	L. 53289/10 deposited at Head Office, Department of Lands, Wellington
1910	Rabbit Island	Entire island (2,600 acres approx)	Rabbit Island was brought under the operation of and declared to be subject to the provisions of Part 2 of the Public Reserves and Domains Act 1908, as the Rabbit Island Domain.	By Order in Council made on 24 of February 1910 and published in the New Zealand Gazette on 3 March 1910	pg 734	
1910	Rabbit Island	Entire island (2,600 acres approx)	The Governor of NZ appointed nine persons to the Rabbit Island Domain Board, under section 40 of the Public Reserves and Domains Act 1908, to control the domain.	By Order in Council made on 13 June 1910 and published in the New Zealand Gazette on 16 June 1910	No.59, pp 1744-1745	L. 53289/10 deposited at Head Office, Department of Lands, Wellington

YEAR	LOCATION	AREA OF LAND	CHANGE TO LAND STATUS/MANAGEMENT	MECHANISM	REFERENCE	AREA DELINEATED ON PLAN MARKED
1920	Rough Island	Entire island (350 acres approx)	The reservation for gravel and public utility purposes is cancelled, and the land permanently reserved for plantation purposes. The Governor-General is empowered to vest Rough Island in the Corporation of the County of Waimea in trust for plantation purposes, subject to such terms and conditions as he thinks fit.	Section 114 of the Reserves and other Lands Disposal and Public Bodies Empowering Act 1920	s114	
1920	Portion of Rabbit Island	* Most of island (2,245 acres approx) reserved for plantation purposes. **The remainder of the land at Rabbit Island (totalling 365 acres approx) retained its status as a public recreation-ground (the Rabbit Island Domain).	The reservation for recreation purposes over the area of land (approx 2,245 acres) described in s115(3) of the Reserves and other Lands Disposal and Public Bodies Empowering Act 1920* was cancelled and the land declared to be permanently reserved for plantation purposes. The Governor-General is empowered to vest this land in the Corporation of the County of Waimea in trust for plantation purposes, subject to such terms and conditions as he thinks fit.	Section 115 of the Reserves and other Lands Disposal and Public Bodies Empowering Act 1920	s115	*The area of land at Rabbit Island reserved for plantation purposes is shown on plan L and S 1/371, deposited at Head Office, Department of Lands and Survey, Wellington. **The areas of land to retain the status of public recreation-ground are bordered in red on this plan.
1921	Rough Island	Entire island (350 acres approx)	The Governor-General vested all land at Rough Island in the Chairman, Councillors and Inhabitants of the County of Waimea, in trust (and subject to conditions), for plantation purposes, under s114 of the Reserves and other Lands Disposal and Public Bodies Empowering Act 1920. Conditions: (1) Waimea County Council must prepare a general forest working plan and annual or periodic planting plan, to be approved by the Commissioner of State Forests prior to planting. (2) State Forest Service has free access to the reserve at all times. (3) Council to pay State Forest Service all expenses incurred in meeting these conditions.	By Order in Council made on 22 August 1921 and published in the New Zealand Gazette on 25 August 1921	No.78, pg2189	S.O. plan 1211.
1921	Rabbit Island	Those parts of the island (2,245 acres approx) reserved for plantation purposes.	With the exception of the 355 acres reserved for recreation purposes, the Governor-General vested all remaining land (approx 2,245 acres) at Rabbit Island in the Chairman, Councillors and Inhabitants of the County of Waimea, in trust, for plantation purposes, subject to conditions – under s114 of the Reserves and other Lands Disposal and Public Bodies Empowering Act 1920. Conditions: (1) Waimea County Council must prepare a general forest working plan and annual or periodic planting plan, to be approved by the Commissioner of State Forests prior to planting. (2) State Forest Service has free access to the reserve at all times. (3) Council to pay State Forest Service all expenses incurred in meeting these conditions.	By Order in Council made on 22 August 1921 and published in the New Zealand Gazette on 25 August 1921	No.78, pg2189	S.O. plans 1211 and 8255.
1926	Four parts of Rabbit Island	The areas of land reserved as public recreation-ground (approx 365 acres).	The Governor-General appointed a Domain Board to have control of the Rabbit Island Domain, under the Public Reserves and	By Order in Council made on 20 of April 1926 and published in the New	pg1104	The area of land at Rabbit Island reserved as public recreation-ground are

YEAR	LOCATION	AREA OF LAND	CHANGE TO LAND STATUS/MANAGEMENT	MECHANISM	REFERENCE	AREA DELINEATED ON PLAN MARKED
			Domains Act 1908. The Domain Board comprised of nine individuals, named in the Gazette notice.	Zealand Gazette on 29 April 1926.		bordered in red on plan L and S 1/371, deposited at Head Office, Department of Lands and Survey, Wellington.
1930	Portion of Rabbit Island	Portions of a closed road (38 acres approx): all Sections 11, 12 and 13, Block II, Waimea Survey District.	The Governor-General proclaimed and declared that portions of a closed road intersecting the plantation reserve (a land area totalling approx 38 acres) were added to the plantation reserve, under s12(9) of the Land Act 1924.	By a proclamation made on 29 September 1930 and published in the New Zealand Gazette on 2 October 1930.	No.67, pg2869	S.O. plans 8250, 8523 and 8570.  The area of land (38 acres approx) at Rabbit Island to be added to the plantation reserve is outlined in green on plan L and S 1/371 <sub>b</sub> , deposited at Head Office, Department of Lands and Survey, Wellington. The areas of land reserved as public recreation-ground (approx 365 acres) are bordered in red on this plan. Public roads are also excluded from the plantation reserve.
1930	Public road across Rough and Rabbit Islands	Road that runs in a NE direction across Rough and Rabbit Island, ending at the 'Old Domain' area of the recreation reserve near the front beach.	Land now known as Ken Beck Drive was legalised as a public road.	By a proclamation made on 16 April 1930 and published in the New Zealand Gazette 24 April 1930.  By proclamation made on 22 July 1930 and published in the New Zealand Gazette on 24 July 1930.	pg 1461  pg 2219	
1933	Four parts of Rabbit Island	The areas of land reserved as public recreation-ground (approx 365 acres).	The Governor-General revoked the Order in Council dated 20 April 1926 appointing a Domain Board to have control of the Rabbit Island Domain and appointed the Waimea County Council to be the Rabbit Island Domain Board, having control of the land held as Rabbit Island Domain, under the Public Reserves, Domains and National Parks Act 1928.	By Order in Council made on 21 of August 1933 and published in the New Zealand Gazette on 24 August 1933.	No 61, pg 2098	S.O. Plan 8255.
1936	Portion of Rabbit Island	Rabbit Island Domain (365 acres approx)	The Governor-General directed that up to twenty pounds received in respect of the Appleby Bridge Domain shall be used to manage, administer and improve the Rabbit Island Domain, under s61 of the Public Reserves, Domains and National Parks Act 1928.	By Order in Council made on 14 October 1936 and published in the New Zealand Gazette on 15 October 1936	No. 68, pg 1882	The area of land at Rabbit Island reserved as public recreation-ground are bordered in red on plan L and S 1/371, deposited at Head

YEAR	LOCATION	AREA OF LAND	CHANGE TO LAND STATUS/MANAGEMENT	MECHANISM	REFERENCE	AREA DELINEATED ON PLAN MARKED
						Office, Department of Lands and Survey, Wellington.
1944	Birds Island	Entire island (13 acres approx)	Birds Island was added to the Rabbit Island Domain on 24 May 1944.	By Order in Council made on 24 of May 1944 and published in the New Zealand Gazette on 24 May 1944.	No. 44, pg630	
1947	Portion of Rabbit Island and Birds Island	Rabbit Island Domain (365 acres approx) and Birds Island (13 acres approx)	The Governor-General directed that up to fifty pounds received in respect of the Appleby Bridge Domain shall be used to manage, administer and improve the Rabbit Island Domain (including Birds Island), under s61 of the Public Reserves, Domains and National Parks Act 1928.	By Order in Council made on 18 June 1947 and published in the New Zealand Gazette on 19 June 1947	No. 33, pp750-751	The area of land at Rabbit Island reserved as public recreation-ground are bordered in red on plan L and S 1/371, deposited at Head Office, Department of Lands and Survey, Wellington.
1950	Portion of Rabbit Island and Birds Island	Rabbit Island Domain (365 acres approx) and Birds Island (13 acres approx)	The Governor-General directed that up to fifty pounds received in respect of the Appleby Bridge Domain shall be used to manage, administer and improve the Rabbit Island Domain (including Birds Island), under s61 of the Public Reserves, Domains and National Parks Act 1928.	By Order in Council made on 8 March 1950 and published in the New Zealand Gazette on 16 March 1950.	No. 33, pp750-751	The area of land at Rabbit Island reserved as public recreation-ground are bordered in red on plan L and S 1/371, deposited at Head Office, Department of Lands and Survey, Wellington.
1951	Foreshore and Seabed	Embankment connecting Rough Island to Rabbit Island	The Governor-General granted a licence and permit to Waimea County Council to use and occupy a part of the foreshore and land below low-water mark between Rough Island and Rabbit Island, subject to conditions, under the Harbours Act 1950. Conditions: 1. The licence is subject to the provisions of the Foreshore Licence Regulations 1940. 2. Licence term is 14 years from 1 Feb 1951. 3. Licence fee. 4. If deemed necessary, the Council shall provide in the connecting embankment such width of waterway as is essential for the purposes of navigation.	By Order in Council made on 6 February 1951 and published in the New Zealand Gazette on 15 February 1951.	pg171	The area show on plan marked M.D. 9110, deposited in the office of the Marine Department, Wellington.
1960	Portions of Rough and Rabbit Islands	Approx 264 acres in total, comprising Section 1 Rough Island (approx 137 acres) and Sections 1, 2 and 3 of Rabbit Island.	On 3 October 1960, the Minister of Lands cancelled the vesting in the Chairman, Councillors and Inhabitants of the County of Waimea of that part of the reserve for plantation purposes described in the schedule, under the Reserves and Domains Act 1953.	By notice in the New Zealand Gazette published on 6 October 1960.	No. 64, pg1569	Lands described in the schedule are shown on S.O. Plan 10157. They include Section 1 Rough Island and Sections 1, 2 and 3 of Rabbit



YEAR	LOCATION	AREA OF LAND	CHANGE TO LAND STATUS/MANAGEMENT	MECHANISM	REFERENCE	AREA DELINEATED ON PLAN MARKED
						Island (approx 264 acres in total).
1960	Portions of Rough and Rabbit Islands	Approx 264 acres in total, comprising Section 1 Rough Island (northwestern part of the island) and Sections 1, 2 and 3 of Rabbit Island. These additions widened the area of recreation reserve along the front beach and provided a connection to the western embankment between Rough and Rabbit Islands.	On 3 October 1960, the Minister of Lands changed the purposes of that part of the reserve described in the schedule from a reserve for plantation purposes to a reserve for recreation purposes, under Reserves and Domains Act 1953. The Minister also declared the recreation reserve to be a public domain subject to Part III of that Act, to form part of the Rabbit Island Domain and be administered as a public domain by the Domain Board.	By notice in the New Zealand Gazette published on 6 October 1960.	No. 64, pg1569	Lands described in the schedule are shown on S.O. Plan 10157. They include Section 1 Rough Island and Sections 1, 2 and 3 of Rabbit Island (approx 264 acres in total).
1979	Rough Island, Birds Island and Rabbit Island	Islands Nos 3 (Rough), 4 (Birds) and 5 (Rabbit) Waimea Islands District, situated in Blocks II, III and IV, Moutere Survey District and Blocks I, II and III, Waimea Survey District, containing 1195.8812 hectares.	On 7 September 1979, the 'Waimea County Council Empowering Act 1979' came into effect. This Act authorised the Waimea County Council to expend the proceeds of afforestation activities on certain reserve land and to validate certain earlier expenditure. This Act requires Council to apply 10% of the net profit from the sales of forest products and associated activities of the Council conducted on Rabbit and Rough Islands in each financial year, or such greater proportion of it as it considers necessary, for the purposes of adequate maintenance and improvement of the reserves on the three Islands for recreational purposes, or for the purposes set out in section 80 of the Reserves Act 1977. The remainder of the profits may be transferred to the general funds of Council and used for the general purposes of Council.	Waimea County Council Empowering Act 1979	NZ legislation	NA
2015	Rough Island, Birds Island and Rabbit Island	Islands Nos 3 (Rough), 4 (Birds) and 5 (Rabbit) Waimea Islands District, situated in Blocks II, III and IV, Moutere Survey District and Blocks I, II and III, Waimea Survey District. Total area classified as Recreation Reserve = 238.7556 ha. Total area classified as Local Purpose (Plantation) Reserve = 967.6987 ha.	Under the Reserves Act 1977 and a delegated authority from the Minister of Conservation, the Tasman District Council resolved, at its meeting on 22 October 2015, to classify the reserves on the three Islands. Land in the first schedule to the gazette notice was classified as Recreation Reserve (238.7556 ha) and land in the second schedule was classified as Local Purpose (Plantation) Reserve (967.6987 ha).	By notice in the New Zealand Gazette published on 29 October 2015.	No. 117	Refer to schedules in gazette notice. These areas are shown visually on Figure 1 of this Plan.

## **APPENDIX 5: THREATENED AND AT RISK<sup>46</sup> COASTAL BIRD SPECIES IN TASMAN DISTRICT**

Extract from Melville & Schuckard (2013).

### **Nationally critical**

White Heron  
Southern New Zealand Dotterel<sup>47</sup>  
Black-billed Gull  
Black Stilt  
New Zealand Shore Plover

### **Nationally endangered**

Australasian Bittern  
Black-fronted Tern  
Reef Heron

### **Nationally vulnerable**

Wrybill  
Lesser Knot  
Banded Dotterel  
Caspian Tern  
Red-billed Gull  
Pied Shag

### **At risk – declining**

Banded Rail  
South Island Pied Oystercatcher  
Pied Stilt  
Eastern Bar-tailed Godwit  
White-fronted Tern

### **At risk – recovering**

Variable Oystercatcher

### **Relict**

Marsh Crake  
Spotless Crake

### **Naturally uncommon**

Black Shag  
Little Black Shag  
Royal Spoonbill

---

<sup>46</sup> Robertson, H.A.; Dowding, J.E.; Elliott, G.P.; Hitchmough, R.A.; Miskelly, C.M.; O'Donnell, C.J.F.; Powlesland, R.G.; Sagar, P.M.; Scofield, R.P.; Taylor, G.A. (2013). *Conservation status of New Zealand birds, 2012*. New Zealand Threat Classification Series 4. Department of Conservation, Wellington. 22 p.

<sup>47</sup> Shorebird species (waders) are in italics.

## References

- Barlow C. (1993). *Tikanga whakaaro: key concepts in Māori culture*. Auckland: Oxford University Press.
- Department of Conservation (2016). *Restoration resource kit for the Waimea Inlet*. Available online at: <http://www.doc.govt.nz/our-work/waimea-inlet-restoration-project/>
- Environs Holding Ltd (2011). Assessing the mauri of the Kaipara.
- Foster D. (2015). *Interim Archaeological Assessment for Rabbit Island*. Report prepared for P.F. Olsen Ltd on behalf of Tasman District Council.
- Halder A. & Arnold. A. (2010). *Rising to the Challenge: Managing Mapua Rabbit Island's Sewer Rising Main Upgrade*. Report prepared by MWH New Zealand Ltd and Tasman District Council. Retrieved from: [http://www.mwhglobal.com/wp-content/uploads/2013/03/Rising\\_to\\_the\\_Challenge\\_Rabbit\\_Island\\_Sewer\\_Rising\\_Main.pdf](http://www.mwhglobal.com/wp-content/uploads/2013/03/Rising_to_the_Challenge_Rabbit_Island_Sewer_Rising_Main.pdf).
- Harmsworth G.R. and Awatere S. (2013). Indigenous Māori knowledge and perspectives of ecosystems. Ecosystem services in New Zealand—conditions and trends. Manaaki Whenua Press, Lincoln, New Zealand, pg 57.
- Harmsworth G.R. (1997). *Māori values and GIS: the New Zealand experience*. GIS Asia/Pacific: the geographic technology publication for the Asia/Pacific Region (April): pp 40–43.
- Henare M. (1988). Ngā tikanga me ngā ritenga o te ao Māori: Standards and foundations of Māori society. Report of the Royal Commission on Social Policy, Wellington.
- Henare M. (2001). *Tapu, mana, mauri, hau, wairua - a Māori philosophy of vitalism and cosmos*. Indigenous traditions and ecology: The interbeing of cosmology and community: pp 197-221.
- Kingi T. (2016). *Aotūroa Framework, Section 3: Te Tau Ihu Iwi Whakamahere Wakatū* (document). Karewarewa Innovations Consultancy.
- Land Information New Zealand (LINZ) (2015). Moturoa/Rabbit Island official geographic place name, retrieved from: <http://www.linz.govt.nz/regulatory/place-names/find-name/new-zealand-gazetteer-official-geographic-names/new-zealand-gazetteer-search-place-names#zoom=7&lat=-41.26701&lon=173.11213&layers=BTTT>.
- Marsden R.M. (1988). *The natural world and natural resources - Māori value systems and perspectives*. Resource Management Law Reform Working paper 29. Part A. Wellington, Ministry for the Environment.
- Marsden R.M. (1975). God, Man & Universe: A Māori View in 'Te Ao Hurihuri: The World Moves On'.
- Marsden M. & Henare T.A. (1992). *Kaitiakitanga: A definitive introduction to the holistic world view of the Māori*. Paper prepared for the Ministry for the Environment, November 1992 (unpublished). Wellington, Ministry for the Environment.
- Mead H. M. & Grove N. (2001). *Ngā Pēpeha a ngā Tipuna*. Victoria University Press, Wellington, NZ.
- Mead H.M. (2003). *Tikanga Māori: living by Māori values*. Wellington: Huia Publishers.
- Melville D. & Schuckard R. (2013). Effects of selected activities on shorebirds in Tasman District: Management issues and options for sites of international importance.
- Mitchell H. & M.J. (2004). History of Māori of Nelson and Marlborough. *Volume 1 of Te Tau Ihu o te Waka: Te Tāngata me Te Whenua – The People and the Land*. Huia Publishers, Wellington, NZ.
- Mitchell Research (1994). *Proposed Disposal of Biosolids to Rabbit Island, Nelson*. Gibault Upgrades, Responses of Iwi representatives.

- Nelson Regional Sewerage Business Unit (2015). *Biosolids Management Plan*.
- New Zealand Legislation (2016). Te Tau Ihu Claims Settlement Bill. Available from: <http://www.legislation.govt.nz/bill/government/2013/0123/8.0/DLM5214278.html>.
- North M. (2012). *Ecological Assessment Report: Site MO 91 (eastern end of front beach on Moturoa/Rabbit Island)*. Report prepared for Tasman District Council, Native Habitats Tasman (NHT) programme.
- North M. (2012). *Ecological Assessment Report: Site MO 92 (Rough Island shag colony, Greenslade Park)*. Report prepared for Tasman District Council, Native Habitats Tasman (NHT) programme.
- North M. (2012). *Ecological Assessment Report: Site MO 97 (western end of front beach on Moturoa/Rabbit Island)*. Report prepared for Tasman District Council, Native Habitats Tasman (NHT) programme.
- North M. (2012). *Ecological Assessment Report: Site MO 97 (western end of front beach on Moturoa/Rabbit Island)*. Report prepared for Tasman District Council, Native Habitats Tasman (NHT) programme.
- North M. (2010). *Ecological Assessment Report: Site MO 67 (totara-kanuka forest remnant on Rough Island)*. Report prepared for Tasman District Council, Native Habitats Tasman (NHT) programme.
- North M. (2008). *Site Assessment Report for Site MO 9 (intact coastal vegetation sequence on south coast of Moturoa/Rabbit Island)*. Report prepared for Tasman District Council, Native Habitats Tasman (NHT) programme.
- North M. (2008). *Site Assessment Report for Site MO 10 (Rough Island wetland)*. Report prepared for Tasman District Council, Native Habitats Tasman (NHT) programme.
- PF Olsen Ltd (2014). *Tasman District Council Forests: Forest Management Plan for the Period 2014/2019*. Report prepared by Peter Wilks and Sally Haddon for Tasman District Council.
- Robertson, H.A.; Dowding, J.E.; Elliott, G.P.; Hitchmough, R.A.; Miskelly, C.M.; O'Donnell, C.J.F.; Powlesland, R.G.; Sagar, P.M.; Scofield, R.P.; Taylor, G.A. (2013). *Conservation status of New Zealand birds, 2012*. New Zealand Threat Classification Series 4. Department of Conservation, Wellington. 22 p.
- Tasman District Council (2015). *Reserves General Policies*. Available online at: [www.tasman.govt.nz/policy/plans/parks-and-reserves-management-plans/](http://www.tasman.govt.nz/policy/plans/parks-and-reserves-management-plans/)
- Tasman District Council (2001). *Rabbit Island Reserve Management Plan*. Available online at: [www.tasman.govt.nz/policy/plans/parks-and-reserves-management-plans/](http://www.tasman.govt.nz/policy/plans/parks-and-reserves-management-plans/)
- Tiakina te Taiao (2013). Cultural Impact Assessment – Nelson Tasman Cycleway Trust.
- Young A. (2003). Archaeological Assessment: Forestry Block 2.1 and pt Block 2.3 Rabbit Island. Report prepared for PF Olsen Ltd.