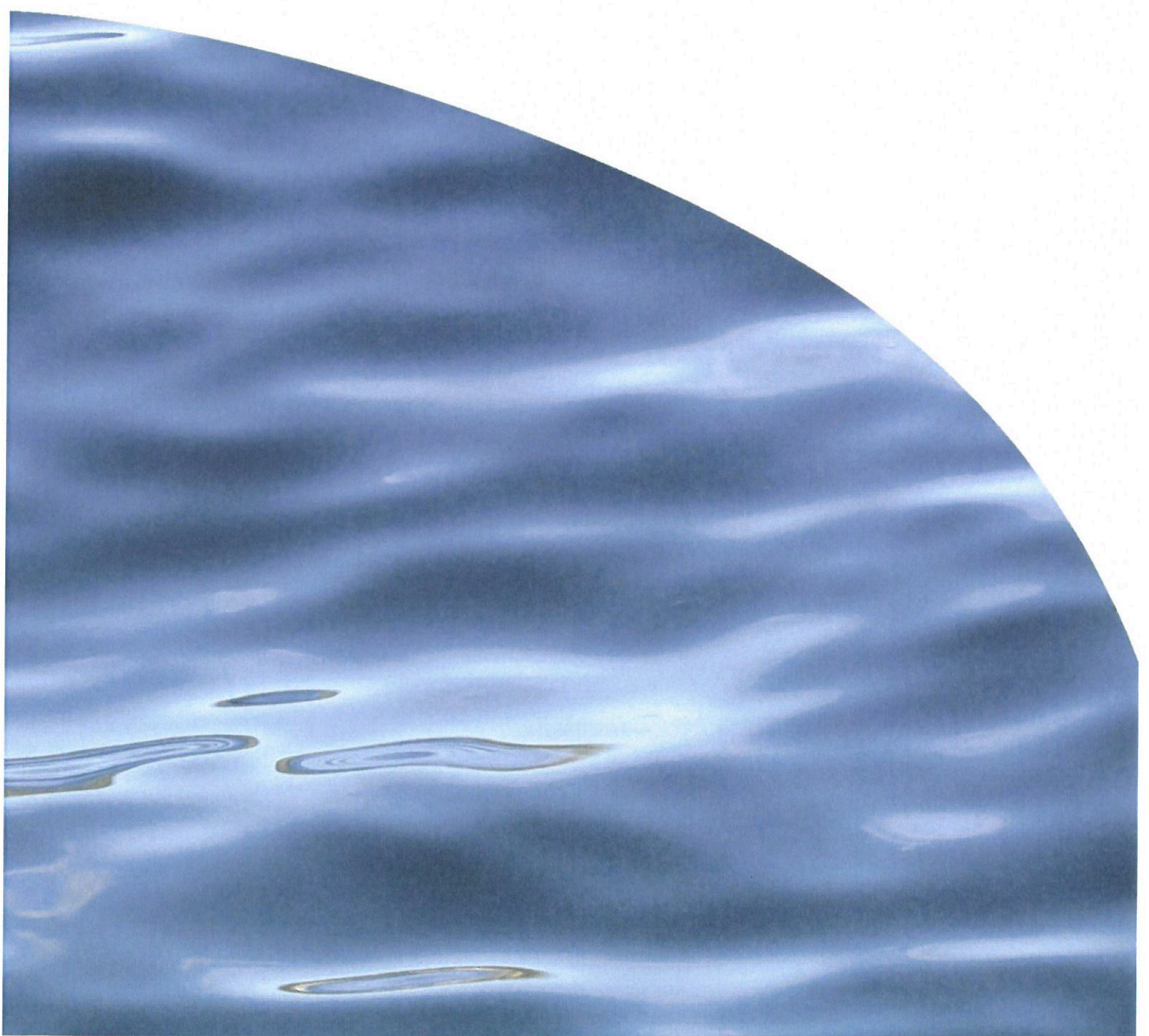




REPORT NO. 3098

**EFFECTS OF MOORINGS ON DIFFERENT TYPES  
OF MARINE HABITAT**





# EFFECTS OF MOORINGS ON DIFFERENT TYPES OF MARINE HABITAT

DONALD MORRISEY, MATTHEW CAMERON, EMMA NEWCOMBE

Prepared for Marlborough District Council

Envirolink Contract 1815 MLDC137

CAWTHRON INSTITUTE  
98 Halifax Street East, Nelson 7010 | Private Bag 2, Nelson 7042 | New Zealand  
Ph. +64 3 548 2319 | Fax. +64 3 546 9464  
[www.cawthron.org.nz](http://www.cawthron.org.nz)

REVIEWED BY:  
Grant Hopkins



APPROVED FOR RELEASE BY:  
Chris Cornelisen



---

ISSUE DATE: 05 January 2018

RECOMMENDED CITATION: Morrisey D, Cameron M, Newcombe E 2018. Effects of moorings on different types of marine habitat. Marlborough District Council. Cawthron Report No. 3098. 41 p. plus appendix.

© COPYRIGHT: This publication must not be reproduced or distributed, electronically or otherwise, in whole or in part without the written permission of the Copyright Holder, which is the party that commissioned the report.



## EXECUTIVE SUMMARY

There are over 3,000 swing moorings for boats in the Marlborough Sounds. Some seabed habitats are highly sensitive to any type of disturbance caused by swing moorings while others may be more resilient. Historically, some of Marlborough's swing moorings are likely to have been placed over areas of the seabed that are sensitive to damage. Marlborough District Council (MDC) has identified a need for a review of the effects of swing moorings on different subtidal habitats, and for guidelines to manage effects.

Block-and-chain swing moorings, which represent the large majority of moorings currently present in the Marlborough Sounds, consist of an anchor (usually a concrete block) to which is attached a heavy-gauge ground chain, an intermediate chain and a top ('riser') rope, with a large surface float. MDC's *Mooring construction guidelines* recommend that the length of chain used be equal to the depth of water at mean high water of spring tides, with one third of this chain to be ground chain. Conventional swing moorings can impact the seabed surrounding the anchor via the arc swept by the chain. In situations where a single mooring anchor is used, the mooring chain may be dragged repeatedly across the seabed through an arc of 360° around the anchor with changes in tidal movement and wind direction. Even in areas without conspicuous surface features, chain-scour will loosen sediments, making them more vulnerable to erosion and alteration of texture by water movement.

Habitats and species of particular ecological, cultural or conservation significance that are particularly sensitive to the effects of block-and-chain moorings include:

- rocky reefs and cobble fields (moorings are not likely to be located on these substrata but may be close enough that the reef is within the area swept by the chain)
- macroalgal beds (where these are growing on reef, moorings are not likely to be located within them but may be close enough that the bed is within the area swept by the chain)
- beds of rhodoliths, hydroids, bryozoans, shellfish, brachiopods, burrowing anemones or sea grass (eelgrass)
- sponge and bryozoan gardens
- tubeworm mounds, reefs and beds
- areas of shell hash (shell hash can provide important habitat diversity in soft sediments and chain sweep will enhance rates of breakdown of the hash)
- fish spawning and nursery areas not included in above (through direct destruction and through loss of structures to which eggs are attached and in which juveniles may shelter).

The simplest method for limiting adverse effects of swing moorings on significant seabed habitats and organisms is to restrict them to locations where they are absent, such as areas

of muddy or sandy sediment. However, disturbance to these habitats will impact the animals living within the sediment and could have adverse ecological effects, such as loss of feeding areas for fish. It is also important to note that current absence of significant habitats or species from an area of seabed may reflect the effects of past activities, such as trawling or dredging, and that removal of all these sources of disturbance would allow recovery of valued ecological features.

Alternative types of mooring can be used that are designed to avoid damage to the surrounding seabed. These typically employ an elastic component in the mooring line that takes up slack in the line at low tide or calm conditions, preventing the line/chain from lying on the seabed. Several studies in Australia have shown that these designs can prevent damage to sea grass beds and, when they replace block-and-chain moorings, allow recovery of the habitat.

We suggest the following guidelines for assessing consents for moorings:

1. No consents for new moorings in ecologically significant marine sites (ESMS) where the mooring will adversely affect the values on which the significance of the site is based.
2. Existing moorings in ESMS to be removed or converted to environmentally friendly moorings where the mooring has adversely affected the values on which the significance of the site is based.
3. Applications for all new consents or renewal of existing consents shall include a description of habitats in the vicinity of the mooring and identification of significant habitats or species present (to be documented with, for example, video or drop camera images).
4. New consents in locations outside ESMS but where significant habitats or species are present shall require environmentally friendly moorings.
5. Existing moorings located in areas with significant habitats or species nearby shall be converted to environmentally friendly moorings or removed if damage is occurring. This includes cases where a significant species or habitat, such as eelgrass or horse mussels, is present within the mooring field but outside of the areas of chain sweep, or in areas around the mooring field, when such species or habitats may be expected to recolonise the impacted areas if ground chains are removed.
6. New consents to have moorings preferentially in areas of mud or sand seabed with no specific ecological, conservation or traditional value.

Application of these guidelines requires information on the nature of the seabed in the vicinity of the proposed (or existing) mooring and identification of significant habitats and organisms present. Guideline 3 is intended to ensure that suitable information is provided with the consent application to allow application of the other guidelines and this, and the second guideline, have already been used in recent consent approvals. MDC has recently mapped and classified benthic habitats in Queen Charlotte Sound and Tory Channel using ground-

truthed multibeam sonar<sup>1</sup>. This information will inform consent decisions in terms of the physical nature of the seabed environment.

We also recognise that, were larger-scale forms of disturbance (dredging, trawling, etc.) to be reduced in areas of soft-sediment seabed, mooring chain disturbance would appear relatively more important as a driver of seabed health.

Given the higher cost of environmentally friendly moorings (by a factor of two or more), demonstrations of their reliability and effectiveness, both in holding vessels and in protecting the seabed, is likely to be a significant factor in their uptake by vessel owners. Standards and quality-management systems for the manufacture and installation of moorings would provide confidence to vessel owners and insurers. MDC may also wish to consider facilitating demonstrations of potentially suitable moorings, in collaboration with mooring manufacturers and installers, vessel owners and other stakeholders.

---

<sup>1</sup> For further information, see: [www.marlborough.govt.nz/environment/coastal/seabed-habitat-mapping/totaranuiqueen-charlotte-sound-seabed-mapping](http://www.marlborough.govt.nz/environment/coastal/seabed-habitat-mapping/totaranuiqueen-charlotte-sound-seabed-mapping)





## TABLE OF CONTENTS

1. BACKGROUND AND SCOPE .....	1
2. MOORING STRUCTURE AND INSTALLATION .....	3
2.1. Mooring structure.....	3
2.2. Location and installation of moorings .....	5
3. ECOLOGICAL EFFECTS OF MOORINGS ON SEABED HABITATS .....	6
3.1. Direct physical disturbance.....	6
3.1.1. <i>Disturbance caused by installation of moorings</i> .....	7
3.1.2. <i>Direct disturbance caused by mooring-chain scour</i> .....	7
3.1.3. <i>Habitats and species vulnerable to direct disturbance by moorings</i> .....	10
3.2. Indirect effects of disturbance of the seabed .....	16
3.2.1. <i>Erosion and resuspension of sediments</i> .....	16
3.2.2. <i>Introduction of hard substratum</i> .....	18
3.2.3. <i>Predator-prey interactions and provision of refugia</i> .....	18
3.3. Recovery and the frequency of disturbance .....	19
4. EFFECTS OF MOORINGS RELATIVE TO OTHER SOURCES OF DISTURBANCE ...	21
4.1. Natural disturbances and storms .....	21
4.2. Dredging and trawling.....	22
4.3. Land runoff .....	23
4.4. Vessel disturbance and anchoring.....	23
5. MITIGATING THE EFFECTS OF MOORINGS .....	25
5.1. Low sensitivity habitats .....	25
5.2. Appropriate mooring densities .....	25
5.3. Alternatives to block-and-chain mooring systems.....	26
5.4. Habitat change after installation of environmentally friendly moorings .....	28
5.5. Expected effects of changes in mooring type in the Marlborough Sounds .....	30
6. MANAGEMENT GUIDANCE AND RECOMMENDATIONS.....	31
6.1. Habitats and species sensitive to the effects of different types of mooring.....	31
6.1.1. <i>Block-and-chain moorings</i> .....	31
6.1.2. <i>'Environmentally friendly' and other types of moorings</i> .....	31
6.2. Recommendations for assessing consent applications for moorings .....	32
6.3. Encouraging the use of environmentally friendly moorings .....	33
7. ACKNOWLEDGEMENTS .....	35
8. REFERENCES .....	35
9. APPENDICES.....	42

## LIST OF FIGURES

Figure 1. Conventional block-and-chain mooring system for small vessels. ....	4
Figure 2. Areas of sea grass ( <i>Posidonia</i> / <i>Zostera</i> / <i>Halophila</i> ) damaged by swing moorings in Manley Cove, New South Wales. ....	8
Figure 3. Chain sweep effects of moorings in Waikawa Bay. ....	9
Figure 4. Traditional (left) versus elastic (right) mooring ropes.....	27

Figure 5. Seaflex® mooring, consisting of a parallel series of elastic hawsers. .... 28  
Figure 6. Photographs of a sea grass-friendly mooring taken in 2009 (left) and 2010 showing  
recovery of sea grass..... 29

## LIST OF APPENDICES

Appendix 1. MDC Mooring construction guidelines ..... 42

## 1. BACKGROUND AND SCOPE

There are over 3,000 swing moorings for boats in the Marlborough Sounds. Some of these are likely to be placed over areas of the seabed that are sensitive to damage, such as biogenic habitats<sup>2</sup>. Some seabed habitats are highly sensitive to any type of disturbance caused by swing moorings while others may be more resilient. There are bays in the Marlborough Sounds containing high concentrations of moorings that, individually, may have relatively minor effects but may be having a significant cumulative effect. Waikawa Bay, for example, has moorings over a predominantly mud substratum. We understand that some local iwi view this as unacceptable and would like these replaced by mooring systems that do not disturb the seabed to reduce perceived cumulative effects from repeated disturbance. Environmentally sensitive moorings are designed to reduce disturbance to the seafloor, protect benthic (seabed) organisms and habitats.

Marlborough District Council (MDC) has identified a need for a review of the effects of swing moorings on different seabed habitats, and for guidelines to manage effects. In some situations, swing moorings may cause localised damage while, at the same time, prevent larger-scale adverse effects from other activities, such as dredging and bottom trawling in the vicinity of the mooring.

Marlborough District Council's recently notified Marlborough Environment Plan (MEP) contains two objectives aimed at protecting and enhancing marine biodiversity:

- 8.1 Marlborough's remaining indigenous biodiversity in terrestrial, freshwater and coastal environments is protected.
- 8.2 An increase in area / extent of Marlborough's indigenous biodiversity and restoration or improvement in the condition of areas that have been degraded.

The MEP gives effect to Objectives 8.1 and 8.2 in part through a rule (Rule 16.7.5) that prohibits 'fishing activity that uses a technique that disturbs the seabed' (including dredging and bottom trawling) in marine sites assessed as ecologically significant (see Section 3.1.3 of this report for a definition of these sites). However, this prohibition does not include other forms of seabed disturbance, such as anchoring and mooring that may have adverse effects on seabed habitats and organisms.

Following public submissions challenging the MEP, its implementation is awaiting a decision by the Hearings Panel in 2018. Consequently, Rule 16.7.5 has not yet been given legal effect. The Marlborough Sounds Resource Management Plan, which is currently in effect, does not contain any restrictions on seabed disturbance other than through the consenting process. A resource consent is required for a swing mooring

---

<sup>2</sup> Biogenic habitats are those formed by living organisms, such as coral, tubeworm mounds, sponge gardens or rhodolith (calcareous red algal) beds.

or stern-tie mooring in the Marlborough District. Under statutory acknowledgement of their association with the area, each of the Te Tau Ihu iwi is informed of all resource consent applications in the Marlborough Sounds. One of the iwi has made submissions in response to recent resource consent applications, suggesting that traditional mooring chains be replaced by moorings that are more environmentally sensitive.

MDC therefore seeks to understand the relative ecological effects of different types of swing moorings. MDC would also like to understand which types of mooring are appropriate or inappropriate in each type of habitat and to identify situations in which more environmentally sensitive mooring systems would be preferable. The findings of such a study are also likely to be of value to other councils.

In summary, the information sought by MDC is as follows:

- An understanding of the relative ecological effects of different mooring technologies and of which types of mooring are appropriate or inappropriate in each type of habitat, i.e., to identify situations in which more environmentally sensitive mooring systems would be preferable.
- A characterisation of seabed habitats based on sensitivity and risk of damage by mooring, including habitat types absent or uncommon in the Marlborough District but present in other areas of New Zealand.

In this report we:

- review the structure of swing moorings and current guidelines on appropriate locations for them
- identify ecological effects of swing moorings
- identify which seabed habitat types are sensitive to which type of swing mooring
- assess the effects of swing moorings relative to other causes of disturbance to the seafloor in the Marlborough Sounds
- identify methods of mitigating and managing effects of swing moorings, including identifying habitats for which traditional moorings may still be appropriate.

## 2. MOORING STRUCTURE AND INSTALLATION

### 2.1. Mooring structure

The vast majority of moorings in the Marlborough Sounds are block-and-chain swing moorings (Peter Johnston, pers. comm., MDC). There are also some stern-tie moorings which typically use a block-and-chain mooring for the bow of the vessel, with the stern attached by a rope to an anchor (such as an embedded piece of railway iron or, less commonly, a tree) on the adjacent land. In addition, a relatively small number of moorings in the Sounds use a subsurface, elasticated element to keep the chain above the bed and reduce the swing radius. These are usually attached to concrete-block anchors, although they can be used with screw anchors. These alternatives to block-and-chain moorings are described in more detail in Section 5.3.

Conventional moorings are attached to a mooring block or weight ('gravity anchor') that relies on its mass and/or burial into the seabed to secure the mooring. Concrete block anchors are normally used for swing moorings in New Zealand, mainly because their resistance to loads in any horizontal direction and the minimal effects of corrosion on them (OCEL undated). Other anchoring options include mushroom anchors and helical screws, which achieve similar holding strength for lighter mass.

In conventional moorings, one end of a heavy-gauge, ground chain is attached to the anchor and the other end is attached to a lighter-gauge, intermediate chain. The intermediate chain attaches, via a swivel, to a top ('riser') rope or chain, with a large surface float and accompanying pendant for securing to the vessel (Figure 1). The catenary curve<sup>3</sup> given by the weight of the chain to the mooring line creates a reduced angle of pull on the anchor, increasing the level of force it will resist before dragging. The greater the excess chain length (and the heavier its weight), the more effective the catenary effect; however, this must be balanced against the increasing arc of vessel swing, which limits mooring density.

There is currently no national or regional marine-industry standard design for moorings in New Zealand (OCEL undated). However, mooring specifications and guidelines have been developed by regional and district councils, including MDC. Northland Regional Council has developed mooring guidelines in collaboration with Auckland Council, Waikato Regional Council and mooring contractors (OCEL undated). The various guidelines developed by councils are consistent in the general design of the moorings (Figure 1) but differ in some details, such as the lengths of the chain components.

---

<sup>3</sup> The curve that a hanging chain assumes when supported at its ends.

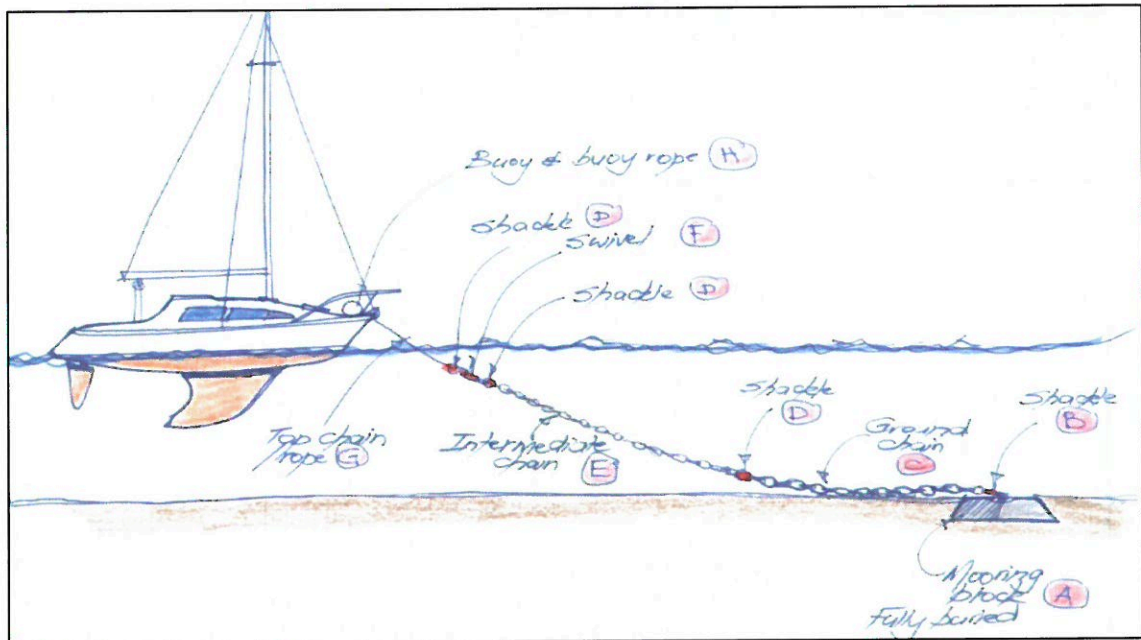


Figure 1. Conventional block-and-chain mooring system for small vessels. The mooring consists of an anchor block (A), shackle and ground chain (B, C), shackle and intermediate chain (D, E), shackles, swivel and top ('riser') chain or rope (D, F, G) and buoy and buoy rope (H). Source: OCEL (undated).

MDC's *Mooring construction guidelines* (see Appendix 1) recommend that the length of chain used be equal to the depth of water at mean high water of spring tides, with one third of this chain to be ground chain. The length of the top rope should also be equal to the depth of water at mean high water of spring tides, making the total length of chain and rope equal to twice the depth of water at mean high water of spring tides. The guidelines also specify the weight of the mooring block and the diameters of chains and ropes, according to the size of vessel.

Screw anchors differ from gravity anchors in that they can accommodate high vertical loads at the anchor position (OCEL undated). Consequently, chain is not required to convert vertical loading at the point where the line attaches to the vessel into horizontal loading at the attachment to the anchor.

Moorings and their anchors may be placed independently or in multiple arrangements to increase holding ability and decrease the vessel's swing arc, depending on the specific site conditions and required mooring densities.

## 2.2. Location and installation of moorings

Practicality dictates that swing moorings for small vessels in the Marlborough Sounds are located in sheltered locations with minimal wave exposure, generally near the shore in bays or the fringes of the main reaches of the Sounds. Applicants for a consent to install a mooring in the Marlborough District must provide an assessment of effects of the mooring on the following:

- maritime safety, including location relative to navigational routes, existing moorings, jetties, launching ramps and marine farms
- recreational values and casual anchoring, including location relative to areas used for swimming, kayaking, diving, fishing and water-skiing
- amenity values, including established appearance and uses of the area, presence and types of other moorings, vessels or man-made structures
- utilities, including underwater cables
- land-based facilities, including requirement for a launching ramp, boatshed or similar and the parking of vehicles, dinghies and/or trailer parking on public land
- marine ecology, including whether the vessel to be moored has sewage treatment or holding tanks, whether the mooring is designed to prevent seabed disturbance by the dragging of the mooring tackle, and whether it is located within an identified area of ecological significance (see Section 3.1.3).

Gravity anchors, such as concrete mooring blocks, are lowered to the seafloor from a vessel and must be embedded in the seabed. Gravity anchors derive their resistance to being dragged from a combination of frictional resistance to sliding over the seabed and passive 'earth pressure' resistance to lateral movement through the sediment in which it is buried. The block needs to displace sediment and water as it enters the seabed and it may need to be buried by dragging or applying jets of water or air to liquefy the sediment around it to ensure that it is securely embedded. Burial also reduces the risk that the block will be hit by the keels of boats.

Although currently much less commonly used for swing moorings than gravity anchors, screw anchors do not require to be set or dragged to develop their full anchoring potential. They are screwed vertically into the sediment by an installation tool (auger driver) deployed from a workboat or barge.

### 3. ECOLOGICAL EFFECTS OF MOORINGS ON SEABED HABITATS

#### 3.1. Direct physical disturbance

Direct physical disturbance has been identified as one of the principal threats to New Zealand marine habitats (MacDiarmid et al. 2012). In the Marlborough Sounds, the total area of significant marine sites has declined by c. 215 ha between 2011 and 2016 (Davidson & Richards 2016: it should be noted that much of the information used to assess the significance of sites was collected in the 1980s, so the period of change is likely to be longer than 2011–2016). Some of these losses were the result of the partial or complete removal (i.e. loss of those values that conferred significance) of an entire site (namely loss of a horse mussel bed), and loss of status as the best example of an estuary due to sedimentation from the catchment. In addition, the areas of some individual sites have declined by 27%–96% (Davidson & Richards 2015). Davidson and Richards (2015) suggested that much of this loss was due to anthropogenic effects such as trawling, dredging and sedimentation and that remaining areas are remnants of larger areas reduced or lost due to previous anthropogenic activities.

Physical disturbance of subtidal marine habitats can be characterised in terms of both intensity and severity. The intensity of a disturbance may be defined as the physical force of an event per unit area, per unit time. The severity is the impact on a particular organism, community or ecosystem; at the individual level this might be expressed as the energetic costs of rebuilding a burrow, at the population level as the proportion of individuals killed or at the community level, by a change in species diversity (Hall 1994).

Sources of physical disturbance and sediment transport include natural hydrodynamic processes, biological activities of the animals that live in, on or close to the sediment, and anthropogenic disturbances. The hydrodynamic regime (mainly tidal and wind-driven currents) of an area largely determines its sedimentary characteristics and consequently its broad-scale community patterns (Hall 1994). The physical nature and resulting community structure may be further disturbed or influenced by the organisms that live there through activities such as burrowing, grazing and the formation of biogenic habitats such as tubeworm and bryozoan reefs and shellfish beds (Wright & Jones 2006).

Impacts of anthropogenic disturbance can often be high in terms of both their intensity, severity and extent (Tuck et al. 2017). Many of the structure-forming species, as well as other species that serve important functional roles on the seafloor, are sensitive to physical disturbance. Biological traits (e.g., morphology, life history, dispersal characteristics) can determine both the sensitivity of different species to the



disturbance impact, and to their ability to recolonise disturbed habitats (Lundquist et al. 2013).

In general, high rates of disturbance to benthic communities reduce habitat structure, resulting in homogenous, simple, low diversity communities, the loss of large and long-lived sedentary species that create habitat structure, and associated reductions in primary production and ecosystem function (Handley et al. 2014). Estimating the relative impact of a particular physical disturbance on seabed habitats requires a prior understanding of co-occurring natural and anthropogenic processes of disturbance. These dynamics are rarely well understood.

### *3.1.1. Disturbance caused by installation of moorings*

Installation of anchors, particularly gravity anchors such as concrete blocks, will cause temporary disturbance of the seabed at and immediately around the mooring location. Some of this disturbance will be short-lived (weeks or months) but there will be a small, permanent loss of soft sediment habitat. This loss will be slightly larger for gravity anchors than for screw anchors.

Irrespective of type, installation of an individual anchor will directly impact a relatively small area of the seabed, and the accompanying biological communities. Even at maximum mooring densities, the anchors themselves will have a small benthic footprint.

Their relatively small size, low profile, and low density, coupled with moderate water depths, also means that mooring anchors will likely have only very localised and negligible influences upon water circulation.

### *3.1.2. Direct disturbance caused by mooring-chain scour*

Conventional swing moorings can impact the seabed surrounding the anchor via the arc swept by the chain (Demers et al. 2013; Unsworth et al. 2017). Chains are necessarily long to allow for tidal rise and fall and to form a catenary against lift and shock loading from the moored vessel under the influence of wave action. In situations where a single mooring anchor is used, the mooring chain may be dragged repeatedly across the seabed through an arc of 360° around the anchor with changes in tidal movement and wind direction. With repeated scouring, the mooring chain can clear a circular mooring scar in the surrounding seabed (**Figure 2**).



Figure 2. Areas of sea grass (*Posidonia* / *Zostera* / *Halophila*) damaged by swing moorings in Manley Cove, New South Wales. Source: Bowman (2008).

Previous Cawthron studies have identified physical mooring scars associated with swing moorings in Waikawa Bay, in the Marlborough Sounds (Figure 3). Based on the construction guidelines for moorings in Marlborough, the radius of the area swept by the ground chain will be one third of the water depth at mean high water springs. In 10 m water depth, the area swept will be c. 35 m<sup>2</sup>, c. 79 m<sup>2</sup> in 15 m depth, and c. 140 m<sup>2</sup> in 20 m depth. These areas may, however, be underestimates. Demers et al. (2013) estimated that the area of damaged seagrass around each mooring was 254 m<sup>2</sup> at a location in New South Wales where swing moorings had been in place for 30 years in water of 3–6 m deep. Further information on the scale of effects of moorings in Queen Charlotte Sound is likely to be provided by the recent multibeam survey commissioned by MDC<sup>4</sup>.

<sup>4</sup> [www.marlborough.govt.nz/environment/coastal/seabed-habitat-mapping/totaranuiqueen-charlotte-sound-seabed-mapping](http://www.marlborough.govt.nz/environment/coastal/seabed-habitat-mapping/totaranuiqueen-charlotte-sound-seabed-mapping)

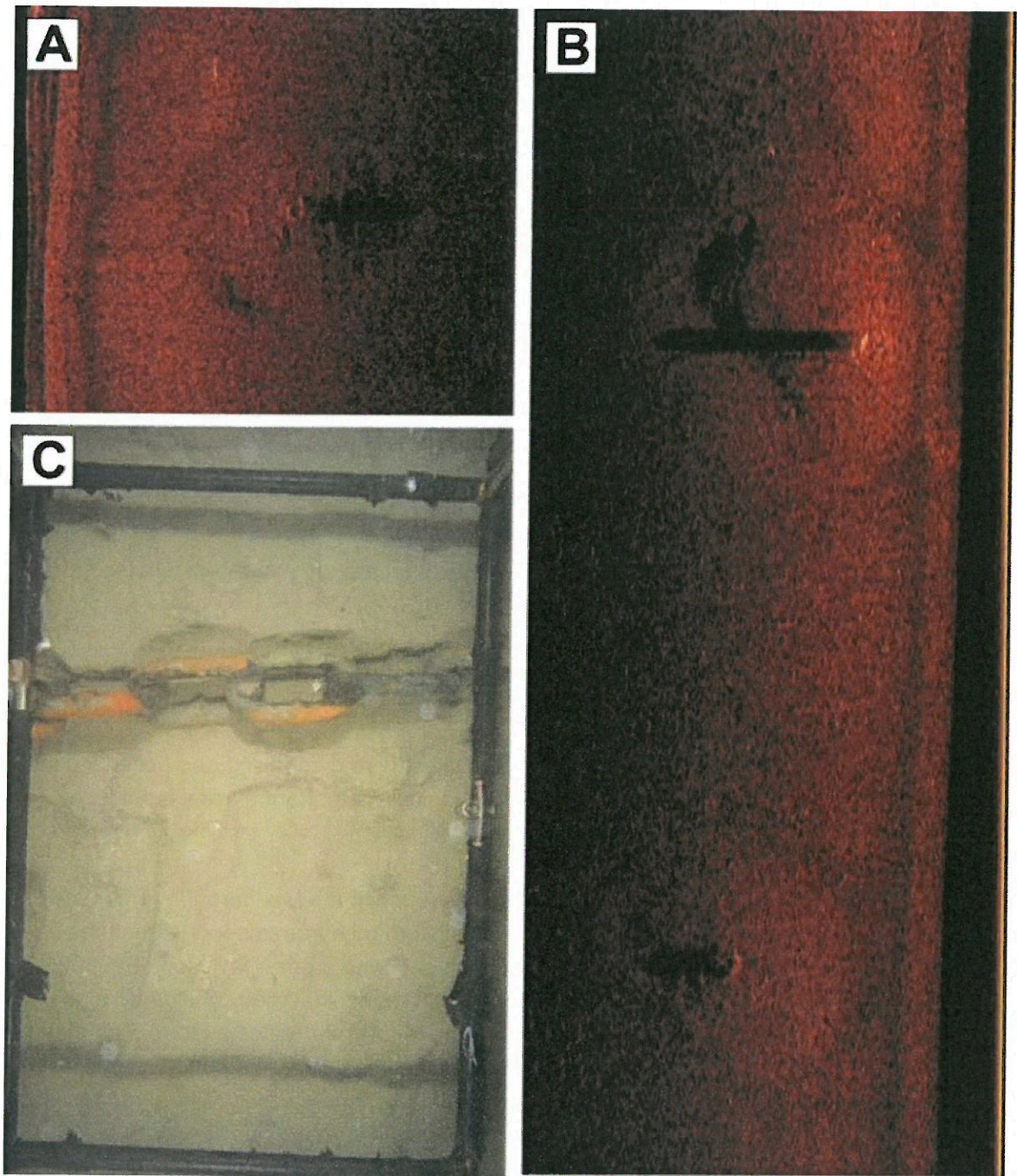


Figure 3. Chain sweep effects of moorings in Waikawa Bay. Images A and B show side-scan sonar images of circular seabed mooring scars and sonar shadows cast by the central mooring blocks. Scars are 14–20 m in diameter in water depths of 8–14 m. Image C shows a drop-camera image of an *in situ* mooring chain, illustrating the sweep imprint in soft mud / sand substrate. Source: Sneddon (2010).

The formation of mooring scars has been identified as an issue of concern overseas for benthic areas characterised by high conservation value biogenic features (e.g. sea

grasses, corals, shellfish beds: Demers et al. 2013; Unsworth et al. 2017). Frequent scraping of the surface sediments by mooring chains may directly damage organisms and also remove biogenic structures such as burrows, mats of benthic microalgae and beds of tubeworms.

### *3.1.3. Habitats and species vulnerable to direct disturbance by moorings*

Work commissioned by MDC identified and described the ecological value of significant marine sites around the Marlborough Sounds area from Cape Soucis (Tasman Bay) to Willawa Point (East Coast) (Davidson et al. 2011)<sup>5</sup>. In addition to highlighting important species and specific environmental issues and threats across the region, the report also evaluated the ecological significance of various sites across nine biogeographic areas<sup>6</sup>, based on an assessment of the following seven criteria:

1. representativeness – a good example of biological features
2. rarity – status of plants and animals and communities / habitats
3. diversity – a wide range of species and habitats
4. distinctiveness – ecological features that are unique or outstanding
5. size – how large the site was
6. connectivity – proximity to other significant areas
7. adjacent catchment modifications – protected native vegetation preferred.

A total of 129 ecologically significant sites were recognised and described in the report, based on the presence of ecologically important or rare species, or commercially or culturally valuable species.

A number of habitat types and species found in the Marlborough region are likely to be particularly vulnerable to physical disturbance from mooring structures due to their life history traits or proximity to suitable mooring areas. Davidson et al. (2015) identified 11 sites within the Marlborough region that they considered highly vulnerable with such low natural tolerance for disturbance as to require complete protection. A further 60 sites were identified as vulnerable but could tolerate minor levels of disturbance such as occasional anchoring activity. Three more sites were identified that had lost their particular benthic values since surveys were carried out in 2011 and required rehabilitation. Davidson and Richards (2016) identified a further 11 significant marine sites across the Marlborough region, for five of which they have **made recommendations for complete protection from all forms of physical disturbance.**

---

<sup>5</sup> The maps can be found at: <https://maps.marlborough.govt.nz/smmaps/?map=4f01102c6f934418a54a0b23ceddcb1f>, accessed 2 November 2017.

<sup>6</sup> Area 3 represents Pelorus Sound, Area 4 Queen Charlotte Sound, Area 5 Tory Channel and Area 6 Port Underwood.

Biogenic habitats found in areas of soft sediments in Marlborough include red algal beds, rhodolith beds, sea grass beds, sponge gardens, hydroid beds, bryozoan gardens, tubeworm beds and mounds, and horse mussels and other shellfish beds. These are considered to be ecologically significant by Davidson et al. (2011) and their presence contributes to the recognition of ecologically significant sites. Individual soft-sediment species considered to be of ecological, cultural or conservation significance include the endemic red alga *Adamsiella chauvinii*, burrowing anemones, giant lampshells and scallops. These habitats and species are described below, including their significance in the Marlborough District (Davidson et al. 2011).

Swing moorings for small vessels are usually located in areas subject to low wave exposure. Such areas tend to support species, habitats and communities that are vulnerable to physical disturbance, are slow growing and/or are limited in spatial extent (Davidson et al. 2015). The predominant type of mooring used in the Marlborough District—gravity anchors with chains and rope—is usually placed on soft sediments so that the anchor can embed itself in the seafloor. Any biogenic structures or individual organism protruding above the sediment surface within the area swept by the ground chain of a swing-mooring is likely to be destroyed. The continued presence of the mooring will also prevent recolonisation.

Although moorings are unlikely to be located on areas of rocky reef or cobble (because of their reduced holding capacity on these substrata), they could be positioned close enough that adjacent hard substrata are swept by the ground chain. In this case any organisms present are likely to be destroyed and recolonisation prevented. This will include habitat-forming species such as macroalgae and turfing algae, and encrusting species such as sponges, anemones, ascidians, tubeworms, oysters and mussels. Mobile species, such as crayfish, gastropods, kina and starfish will be excluded for at least part of the time.

#### Red algal beds

The red algae *Adamsiella chauvinii* and *Rhodymenia* spp. can form dense beds 15-20 cm in height. They occur on a variety of substrata including rock, tube worm colonies, horse mussel shells, sand and mud. In Marlborough, particularly dense beds exist in areas of Port Underwood, East Bay, Grove Arm and inner Queen Charlotte Sound.

*A. chauvinii* is regarded as a significant species in Marlborough because its dense beds provide biogenic habitat for a variety of species including bivalves, holothurians and fish, and spawning areas for rough skate and elephant fish. Beds of *Rhodymenia* spp. provide an important food source for a variety of species including urchins and herbivorous fish. Red algal beds likely also affect sediment stability and the cycling of nutrients between seabed and water column.

Specific threats to these species are unknown but the local direct impacts of physical disturbance may be significant.

#### Rhodolith beds

Rhodoliths (*Lithothamnion* spp.) are free-living growths of calcareous algae which form distinct beds on hard substrate interspersed across soft sediments. Open-branching growth forms are common in sheltered environments. In Marlborough, significant rhodolith beds are known from a small number of locations including Picnic Bay, in Pelorus Sound and Ponganui Bay and Catherine Cove on D'Urville Island. Rhodoliths beds enhance local biodiversity by increasing habitat complexity and providing biogenic habitat for algae and invertebrates.

Specific threats to these species are unknown but, due to the delicate structure and relatively slow growth of rhodoliths, the local direct impacts of physical disturbance may be significant.

#### Sea grass beds

Sea grass, or eelgrass, *Zostera muelleri* grows in intertidal and shallow subtidal areas on silty or sandy tidal flats, channels and river mouths in estuaries and, less commonly, coastal beaches and rocky reef platforms (Matheson et al. 2009). Sea grass meadows have been recorded throughout New Zealand, from Parengarenga Harbour in Northland to Cooks Inlet on Stewart Island (the southern limit for sea grass worldwide) (Green & Short 2003). The distribution of sea grass beds has not been surveyed in the Sounds but the beds are apparently more common and larger in Queen Charlotte Sound than in other areas (Davidson et al. 2010). However, Stevens and Robertson 2014 reported that extensive beds are now only present in the well-flushed areas of the lower Havelock estuary, between Cullen Point and Shag Point. Most beds occur in intertidal estuaries and gently sloping shores of sheltered parts of the Sounds. There is also a shallow subtidal bed in Tipi Bay in Tory Channel (Davidson et al. 2010).

Sea grass plays an important role in coastal environments, stabilising sediments, reducing erosion and improving water clarity. Sea grass absorbs nutrients from the water and seabed, releases oxygen and is an important constituent of nutrient cycling in the marine environment (Hailes 2006). It also provides important nursery habitats for snapper and leatherjacket juveniles and other species of fish (Morrison et al. 2014), as well as habitat for numerous small crustaceans and worms that are important sources of food for wading birds and fish (Woods & Schiel 1997).

Sea grass faces a range of major threats including the impacts of climate change, terrestrial sources of pollution, introduced species and direct physical damage from human activities. It is particularly susceptible to local physical disturbance and anything that reduces water clarity and light penetration for photosynthesis or increases sedimentation and eutrophication (Matheson et al. 2009). Damage from

swing mooring chains exposes areas of bare sediment within sea grass beds, fragmenting the sea grass habitat and allowing increased erosion by water movement, potentially exacerbating loss of sea grass (Bowman 2008; Unsworth et al. 2017).

Damage to sea grass beds from swing moorings had been documented in Australia (e.g., Walker et al. 1989; Hastings et al. 1994; Demers et al. 2013) and various governmental and non-governmental programmes have been initiated there to reduce these impacts. These programmes involve assessments of the efficacy, and encouragement of the use, of alternatives to block-and-chain moorings<sup>7</sup>.

### Sponge gardens

Sponges are an important component of many coastal environments on rocky reefs and coarser soft sediments in higher current areas. Sponge habitats appear to play an important nursery function for juvenile snapper on reef and soft sediment habitats (Battershill 1987) and likely provide an important habitat for a wide variety of other fish species (Morrison et al. 2014). Their relative dominance increases with depth, as kelps, which dominate shallower areas, reach the limit of their light tolerance (Morrison et al. 2009). Multispecies 'biogenic clumps', consisting of combinations of sponges, bryozoans, ascidians, hydroids, horse mussels and whole, dead shells have been recorded at 14 sites throughout the Sounds in water depths from 10–60 m (Davidson et al. 2010). Locations included Tawhitinui Reach in Pelorus Sound, several locations in Tory Channel, and Trio Islands (east of D'Urville Island), where two relatively large areas of soft sediment support what appear to be the remnants of once abundant and higher-quality biogenic habitat that has been reduced by dredging and trawling.

As filter feeders, sponges are sensitive to increased suspended sediment loads (Lohrer et al. 2006) and the effects of physical disturbance are likely to be significant in many coastal areas (Morrison et al. 2014). Very little else is known about the specific threats to sponge habitats around New Zealand but, due to sponges' delicate structure and relatively slow growth, direct impacts of physical disturbance from other sources of physical disturbance are likely to be locally significant.

### Hydroid beds

The tree hydroid *Solanderia ericopsis* is found all around New Zealand, at depths from 2–200 m. It occurs on boulders, cobbles and fine sediments throughout the Sounds, including the headlands of Tapapa Point, Tawero Point and Kauauroa Bay where there are strong tidal currents (Davidson et al. 2011). It provides habitat for a variety of invertebrate and fish species, including acting as a substratum for the 'primary settlement' phase of mussel larvae (Handley 2015).

---

<sup>7</sup> See, for example (all accessed 31 October 2017):

<http://www.segcatchments.com.au/case-studies/mooring-trial-to-end-crop-circles-in-moreton-bay>

<https://www.dpi.nsw.gov.au/fishing/habitat/threats/traditional-boat-moorings-in-sensitive-habitats>

<http://sims.org.au/research/current-projects/sea-grass-friendly-moorings/>

As filter feeders, hydroids are sensitive to increased suspended sediment loads. Specific threats to this species are unknown but, due to the delicate structure and relatively slow growth, local direct impacts of physical disturbances are likely to be considerable.

#### **Bryozoan gardens**

*Cellaporaria agglutinans*, *Galeopsis* spp. and other species of colonial bryozoans have delicate, stony skeletons of calcium carbonate, similar in appearance to coral. In New Zealand *C. agglutinans* is also commonly known as Separation Point coral, Tasman Bay coral or hard coral. Bryozoan gardens occur between 3–220 m depth and can form reefs commonly up to half a metre in height. These species are relatively widespread across Marlborough and grow on rocky and soft sediment substrata in high current areas. Large, conspicuous colonies are known from areas in Current Basin, off Separation Point and Chetwode and the Titi islands.

They are important habitat-forming species, forming structurally complex reefs that provide habitat for a variety of species and nursery areas for commercially important fish species such as snapper, terakihi and John Dory. It is also likely that large reefs secure the substrate and modify flow, affecting local sediment composition and resulting ecological relationships.

Colonies are very brittle and vulnerable to damage and associated sedimentation from physical disturbance.

#### **Tubeworm beds and mounds**

A range of worm species create an amalgam of calcareous tubes of sufficient size and density to form biogenic mound or reef habitats (Morrison et al. 2014). Reefs can form over areas in excess of 100 m diameter and be relatively long-lived, in excess of 50 years (Morrison et al. 2009). A high diversity and abundance of algae, invertebrates and fish associate closely with healthy tubeworm reefs (Smith et al. 2005). Although the occurrence and extent of tubeworm mounds and reefs in Marlborough is largely unknown, tubeworm reefs have been identified at sites across the Sounds on both soft and hard seafloor, including areas of Perano Shoal, Queen Charlotte Sound and Port Underwood (Estcourt 1967; Davidson et al. 2010).

Tubeworms are suspension feeders, and excessive sedimentation may lower their fecundity, cause damage, or even kill them (Smith et al. 2005). Specific threats to this species are unknown but, due to the delicate structure and relatively slow growth of mound or reef formation, local direct impacts of physical disturbance are likely to be considerable.

#### **Horse mussels beds**

Horse mussels (*Atrina zelandica*) inhabit muddy and soft sand sediments from extreme shallow water to 70 m depth and will often form dense beds in excess of



10 individuals/m<sup>2</sup>. Davidson et al. (2011) define a horse mussel bed as an area 'with high densities of horse mussels forming a bed or zone (> 4/m<sup>2</sup>)'. Individuals can live up to 15 years, and established beds provide complex biogenic habitat for a wide array of algae, invertebrates and commercially important fish species such as snapper and scallops. Beds have been recorded in many areas of the Sounds including Grove Arm, Wet Inlet and Port Gore.

Direct impacts of physical disturbance are likely to be considerable. Horse mussels are particularly vulnerable to physical disturbance because of their size, delicate shells and inability to re-bury themselves to the substrate after disturbance. They are also sensitive to increased levels of suspended sediments. Large areas of horse mussels have been lost from areas of the Marlborough Sounds, including Pelorus Sound, Guard's Bay and Port Gore due to anthropogenic activities (Davidson et al. 2011).

#### Burrowing anemones

Burrowing anemones (*Cerianthus* sp.) inhabit silty, shell and sand substrata with low to moderate tidal flows. This is a significant species in the Marlborough Sounds due to its relative rarity and low abundance. Burrowing anemones have been recorded from a number of locations in Marlborough and are most common from Oke Rock to Pelorus Sound but also known from Port Ligar and East Cape to Arapawa Island.

Specific threats to this species are unknown but due to their soft bodies and delicate feeding structures, the local direct impacts of physical disturbance are likely to be significant. Their abundance and distribution is thought to be limited in the region by increasing sedimentation and physical disturbance.

#### Giant lampshell

The giant lampshell (*Neothyris lenticularis*) is endemic to New Zealand and sub-Antarctic waters and is widespread across the deeper waters of Cook Strait. It is a significant species of conservation value in Marlborough due to its occurrence at relatively shallow depths in areas of East Bay, Arapawa Island and Queen Charlotte Sounds. At high densities it can form a biogenic habitat, enhancing benthic biodiversity and productivity.

Specific threats to this species are unknown but the local direct impacts of physical disturbance are likely to be considerable.

#### Scallop beds

The scallop *Pecten novaezelandiae* is endemic to New Zealand and is found throughout the Marlborough Sounds. They are particularly abundant in Croisilles Harbour entrance, Queen Charlotte Sound and some outer Sound locations.

Scallops are found on a variety of soft substrata from mud to fine gravel and are most abundant in areas of tidal flow. It is an important recreational and commercial catch species in the Sounds. In their adult phase scallops are mobile but their movements are limited to a range of a few tens of metres. They are sessile in their juvenile stage and their development is highly variable, influenced by local environmental conditions and hydrodynamics. In Marlborough, scallop abundance fluctuates but is considered largely stable. They are primarily caught using dredges, which have a significant negative impact on the surrounding biogenic habitat and broader ecology of the area. Local impacts of physical disturbance and associated sedimentation are likely to be significant.

#### **Fish spawning and nursery areas**

The sheltered bays of the Marlborough Sounds are an important spawning and nursery area for the rough skate (*Zearaja natuta*) and the elephant fish (*Callorhinchus milii*), and likely many other species of fish.

The rough skate is an endemic species to New Zealand, found primarily around the South Island down to depths of around 500 m. Inner Queen Charlotte Sound and Port Underwood are important spawning and nursery areas. Females lay eggs directly onto the seabed, which makes them particularly vulnerable to direct physical disturbance and smothering by sediments.

Elephant fish occur throughout New Zealand and Australia to a depth of around 230 m. Historically they have been a commercially important food fish and their numbers have been recovering following overfishing in the 1970s and early 1980s. Adults migrate to inshore waters in summer to breed and significant spawning grounds have been identified in areas of Garne Bay, Pelorus Sound, Saville Bay, Kumutoto Bay and Grove Arm. Females lay their eggs directly onto the substratum in shallow water, less than 25 m in depth. The eggs have a relatively long incubation period (up to 8 months) making them vulnerable to direct physical disturbance and smothering by sediments.

## **3.2. Indirect effects of disturbance of the seabed**

### **3.2.1. Erosion and resuspension of sediments**

Even in areas without conspicuous surface features, chain-scour will loosen sediments, making them more vulnerable to erosion and alteration of texture by water movement. In general, levels of sediment destabilisation and erosion will be highest in areas of high natural and anthropogenic physical disturbance. Erosion and resuspension of sediments may, in turn, have direct or indirect ecological effects. Gradual modification of the particle size distribution of the sediments inside the swing radius of the mooring may alter the chemical and physical properties of the sediment,

such as the degree and depth of anoxia and changes in organic content. These changes may, in turn, cause changes in the abundance and distribution of animals and plants living in and on the sediment (Hall 1994). Furthermore, organisms such as tube-building worms and mat-forming micro-organisms can have a strong stabilising effect on the sediment, so that damage to these communities is likely to result in a further increase in erodibility.

Disturbances such as mooring scour will re-suspend sediments and alter surface roughness and infaunal community structure and activity. This will further influence sediment structure and rates of erosion. These structures naturally stabilise sediments and protect them from erosion and re-suspension. Sediment destabilisation and resuspension result in the loss of fine sediments and organic content, and changes in sediment and faunal community structure. Re-suspended benthic sediments may have a range impacts on the wider marine environment, including benthic habitat smothering, release of contaminants and pollutants, increased nutrient availability, reductions in dissolved oxygen and water clarity, and effects on fish health.

Sediment deposition has been shown to greatly affect the composition and the ecology of corals (Wittenberg & Hunte 1992) sea grass habitats (Marbà & Duarte 1994) and temperate algal reef communities (DeVinney & Volse 1978; Stewart 1983). It can reduce kelp survival and reproduction (DeVinney & Volse 1978) and it has been suggested that the dominance of algal turfs in many intertidal and subtidal rocky habitats may be related to prolonged high levels of sedimentation and scour (Stewart 1989).

Fine-grained sediments tend to accumulate contaminants by adsorption to the surfaces of the sediment particles, and thus can act as an important pollutant reservoir, reducing the availability of toxicants to aquatic organisms. Changes in sediment chemistry, due to seabed disturbance and resuspension, can result in contaminant re-mobilisation into the surrounding environment and transformation of contaminants into more bioavailable or toxic chemical forms (Simpson et al. 1998).

Sediment resuspension and the resulting release of nutrients and organic matter can enhance the growth of water column bacteria and protozoa, increase benthic and pelagic photosynthesis, impact carbon and nitrogen cycling and increase pelagic and benthic respiration rates and dissolved oxygen demands (Sloth et al. 1996; Wainright & Hopkinson Jr 1997) leading to changes in turbidity and water clarity.

Reduction in the amount of available light caused by suspended particles has a number of consequences. It affects the visual range of organisms and the light energy available for photosynthesis. Reduced visual clarity may affect the behaviour and success of visual predators such as fish and aquatic birds (Lythgoe 1979). Prolonged and increased sediment loading and turbidity are probably a direct and critical source of stress for marine algal and invertebrate communities as a result of reduced

availability of light, oxygen, nutrients and firm substratum for settlement and recruitment and an increase in physical scouring (Daly & Mathieson 1977; DeVinney & Vorse 1978; Shaffer & Parks 1994). Filtration by biogenic habitat-forming bivalve species, such as oysters, has been shown to be important in reducing turbidity, thereby improving light conditions for the recovery of sea grass beds and consequently having a further stabilising effect on sediments and improving water clarity (Newell & Koch 2004).

### 3.2.2. Introduction of hard substratum

The installation of mooring anchors, such as concrete blocks, will produce a slight alteration of the local habitat and community structure due to the small amount of introduced hard substrate they represent in otherwise fairly uniform areas of soft sediments. The area of hard surface available for colonisation will depend on the size of the block and the degree to which it is embedded in the surrounding sediment. It will also be reduced by chain-sweep across the block's surface.

Any biological assemblages that develop on mooring anchors may not be the same as those found on nearby natural hard substrata. Assemblages on other types of artificial structures in harbours (such as wharf piles and pontoons) have been found to differ from those on natural substrata (Connell & Glasby 1999; Connell 2001; Chapman & Clynick 2006; Chapman & Underwood 2011). When assessing the potential for constructed breakwaters to compensate for lost hard substratum associated with the proposed extension of Waikawa Marina, Sneddon et al. (2008) noted that there were differences between the existing breakwater and natural reef habitats in terms of the animals and plants present. There is also a significant risk that artificial hard surfaces will provide a site for colonisation by non-indigenous pests, such as the macroalga *Undaria pinnatifida*, the tubeworm *Sabella spallanzanii* and the ascidians *Didemnum vexillum* and *Styela clava*. All of these species are already present in the Sounds and often occur first on artificial substrata before colonising nearby natural habitats (Russell et al. 2008; Dafforn et al. 2015).

### 3.2.3. Predator-prey interactions and provision of refugia

In addition to direct mortality of benthic organisms caused by the movement of the ground chain, disturbance to the seabed around moorings may attract predatory and scavenging fish and invertebrates. Larger, deeper-burrowing organisms, normally protected from their predators, may become exposed to predation. Fish, birds and marine mammals may, thus, be affected indirectly by a reduction in the diversity and abundance of their prey or physical disruption to their feeding grounds around moorings, but the total area involved will be relatively small. For example, Herbert et al. (2009) found a reduction in the abundance of infauna around intertidal moorings in southern England, including species that are important prey for birds.

Mooring structures may directly affect competition and predation among and within species, potentially leading to differences in the structure of marine benthic communities (Herbert et al. 2009). For example, avoidance of areas of moorings by marine mammals may reduce predation pressure on local populations of some prey species. The presence of moorings also reduces fishing pressure by excluding some fishing practices, notably dredging and trawling.

However, the presence of moorings and vessels may act as attractants for some predators, because of the physical structures provided, by increasing abundances of their prey, or by reducing abundances of their own predators. For example, fur seals and sea birds often use moored vessels (including those in Waikawa Bay, pers. obs.) for hauling out and roosting, which may increase predation pressure locally. Spotties (*Notolabrus celidotus*) can be ten times more abundant beneath mussel farms than on adjacent reefs, apparently attracted to the vertical surfaces of anchor blocks (Carbines 1993). Young spotties settle on coastal reefs and subsequently move to farms, where they tend to remain. Their presence presumably consumption of their prey species and, in turn, may attract their own predators (fish, birds, marine mammals) to the local area.

### 3.3. Recovery and the frequency of disturbance

The magnitude of effects of disturbance on benthic communities, and rates of recovery from it depend, among other factors, on the type of substratum, hydrodynamic factors and supply of adult and larval recolonisers. Chain scour from moorings provides an ongoing ('press') disturbance, periodically (or even continuously if wind and water movements dictate) raking the surface of the sediment and dislodging any organisms projecting above it. This will inhibit or prevent recovery of the animal and plant assemblages, and also prevent stabilisation of the sediment, within the swept area, other than in the very short term. Once sediments have been destabilised by the movement of the ground chain and by the removal of organisms that protect the sediment surface (microalgal mats, tubeworm and shellfish beds and sea grasses), they are likely to continue to erode if water currents are sufficiently strong. Consequently, the indirect ecological effects caused by increased suspended-sediment load will also persist.

Herbert et al. (2009) demonstrated that the recovery of benthic assemblages after removal of intertidal moorings in southern England was incomplete after 15 months, suggesting a relatively long-term impact resulting from changes to particle size distributions (greater prominence of larger particles of gravel and shell). An experimental study (Dernie et al. 2003) showed that the full recovery of soft sediment assemblages from physical disturbance could take between 64 and 208 days following physical disturbances of different intensities. In the case of sea grass beds,

Demers et al. (2013) recorded recolonisation of areas previously swept by mooring chains following replacement with sea grass-friendly moorings<sup>8</sup>. These studies suggest that although recovery of benthic communities is likely to occur after the removal of block-and-chain moorings, it may take many months or even years.

Recovery from other sources of disturbance may be possible in areas within the mooring field that are not actually swept by chains. Additionally, colonisation of mooring blocks by encrusting organisms will potentially create a network of mini-reefs that, while not replacing lost soft-sediment habitat, **may increase the biological diversity of the local area. The risk that these new surfaces may provide substrata for non-indigenous species was discussed in Section 3.2.2.**

---

<sup>8</sup> Demers et al. (2013) did not specify the time-scale of this recovery, but it was apparently less than four years.

## 4. EFFECTS OF MOORINGS RELATIVE TO OTHER SOURCES OF DISTURBANCE

There are numerous sources of natural and human physical disturbance that have the potential to detrimentally impact the marine habitats and communities of the Marlborough Sounds (Davidson et al. 2011). In the absence of detailed empirical investigations, an accurate estimation of the contribution of mooring disturbance to the overall impacts on the marine environment of the Marlborough Sounds is impossible. However, it is assumed that, relative to existing sources of physical disturbance, the environmental impacts of moorings are likely to contribute a relatively small proportion of total disturbance in the Sounds. This assumption is reflected in the common perceptions of visitors to the Sounds. Most visitors believe moorings and jetties were unlikely to create adverse effects on the environmental value of the Sounds beyond minor concerns over their visual impact (Corydon Consultants 2012).

As mooring numbers in the Sounds continue to rise, and existing impacts are reduced in response to improved management approaches and predicted land use changes, their relative contribution to disturbance of the marine environment may well increase. Therefore, in trying to evaluate present and future impacts of moorings, it is important to consider them in relation to the scale, extent and expected continuation of existing sources of physical disturbance.

### 4.1. Natural disturbances and storms

Storms provide an unpredictable, episodic source of natural disturbance and mortality for benthic organisms and may strongly influence community composition (Posey et al. 1996). However, in many cases these effects may be less than background annual variability. Increased natural sediment run-off from land, following extreme rainfall event, flooding and landslides, etc. poses a threat to the biodiversity of shallow estuarine and coastal areas. Storms can result in rapid deposition of fine terrestrial sediments into the marine environment and have serious impacts on benthic communities (Norkko et al. 2002). The role of wind-wave disturbance and transport of sediments and macrofauna, and the importance of bioturbation by benthic organisms, are all important factors in facilitating the recovery of benthic habitats after large natural disturbances.

Climatic change is expected to cause an increase in ocean acidification, rates of sea-level rise and intensity and frequency of extreme coastal storms over the next decades (Scavia et al. 2002; Stocker 2014). Much of the Marlborough Sounds is sheltered from offshore swells and waves due to its topography but in many places disturbance from tidal currents can be high. Relatively minor, local impacts and

disturbances to sheltered marine environments, such as the Sounds, have the potential to be compounded and exacerbated by climate change.

Impacts of erosion and resuspension of benthic sediments due to direct human disturbance must be considered in relation to the scale, extent and flux of existing natural and external factors influencing coastal areas. Habitat types, rates of primary production, terrestrial sources of erosion and pollution and wind-wave and/or tidal resuspension are all highly variable throughout the Marlborough Sounds. Many localised areas are subject to high tidal or land run-off influences and are therefore depositional environments with naturally occurring low water clarity. Levels of physical, human disturbance and pollution will vary throughout the Sounds and in many locations, relative to existing human and natural sources of disturbance, the impacts of mooring structures are likely to be minor and localised in their scale and extent.

#### 4.2. Dredging and trawling

Bottom trawling and dredging can inflict chronic and widespread disturbance on the seabed, causing dramatic reductions in the biomass of infauna and epifauna and possible changes in the trophic structure and function of benthic communities. This can, in turn, have important implications for the processing of primary production and the wider functioning of marine ecosystems (Jennings et al. 2001). Trawling has been shown to reduce the abundance of bioturbating species, important for oxygenating benthic sediments (Widdicombe et al. 2004). The precise consequences of long-term trawling and dredging on the marine environment are often difficult to ascertain due to the widespread, historical extent of these activities. The impact of bottom trawling and dredging on benthic infauna will depend on the natural disturbance levels to which benthic communities are already adapted (Queirós et al. 2006), the types, size and weights of gear, and the frequency of disturbance (Jones 1992). The impacts of trawling can be severe and widespread and studies have revealed that impacts such as the re-suspension of sediment can occur in magnitudes comparable to those caused by storms (Hall 1994).

Various significant marine sites in the Marlborough region are vulnerable to dredging and trawling damage. There are currently a number of commercial and recreational fishing restrictions on the use of trawls and dredges in the Marlborough Sounds based on gear type and seasonal restrictions<sup>9</sup>. As noted in Section 1, MDC has proposed a prohibition on bottom trawling and dredging in most of the ecologically significant marine sites, based on the findings and recommendations of MDC reports (Davidson & Richards 2015; Davidson & Richards 2016) that marine ecosystems in the

---

<sup>9</sup>

[http://www.legislation.govt.nz/regulation/public/1986/0218/latest/whole.html?search=qs\\_act%40bill%40regulation%40deemedreg\\_challenger\\_resel\\_25\\_h&p=1#DLM107955](http://www.legislation.govt.nz/regulation/public/1986/0218/latest/whole.html?search=qs_act%40bill%40regulation%40deemedreg_challenger_resel_25_h&p=1#DLM107955)



Marlborough Sounds are being degraded or lost (Simpson 2016). A review of historical changes in benthic habitats in Pelorus Sound (Handley 2015) found a lack of information on the extent of shellfish beds before the arrival of Europeans. However, there were reports of over-exploitation of mussel stock by the early 1970s, with consequent exposure of the underlying soft sediments.

#### 4.3. Land runoff

Runoff of sediments and other contaminants has historically been high in the Marlborough Sounds due to land clearance and the associated runoff caused by forestry, agricultural and other land use activities (Davidson et al. 2011). Historic and ongoing sources of anthropogenic contamination include meat-processing facilities, boat building, maintenance and berthage, urban stormwater, and treated and untreated sewage discharges. Due to a lack of baseline data the full scale of these effects on the local marine environment over the last two hundred years is largely unknown (Handley 2015, 2016). There have been patchy improvements in land use practices since the 1990s, which have overall not been effective in mitigating the persistent, episodic impacts of forestry activities in the area continue to cause significantly elevated levels of sedimentation into the surrounding marine environment (Ulrich 2015, Handley et al. 2017).

#### 4.4. Vessel disturbance and anchoring

Much of Queen Charlotte Sound between Cooks Strait and Picton is affected by regular vessel traffic (Davidson et al. 2017). High-speed ferries between the North and South islands were introduced in the 1990s with little prior understanding of the environmental effects that might result (or of the baseline conditions that would allow adequate assessment of effects). It is known that increased wave energy from high-speed vessel wakes can cause significant changes to beach and shoreline morphology through erosion, deposition and reorientation, particularly in confined coastal waters with low natural wave energy (Parnell et al. 2007). Implementation of protective management strategies has been hindered by a frequent lack of baseline data and the rapidity at which high-speed vessels have been introduced to near-shore, low energy environments

The introduction of large, high-speed ferries to the Marlborough Sounds caused initial rapid and significant sediment transport and accretion on beaches and coastal environments up to 10 km from the sailing route. This has persisted in many places despite speed restrictions to below 18 knots, imposed on operators in 2000 (Parnell et al. 2007). There are likely to be significant interactions between sediment supply from land runoff and vessel wake erosion in the Sounds (Parnell et al. 2007). Sites along ferry routes in Queen Charlotte Sound have been monitored since 1995, identifying

responses in the biological communities and subsequent recoveries following the implementation of speed restrictions (Davidson et al. 2017).

Management of the impacts of recreational boating is typically based on measures of numbers of boats (e.g. marina berths, vessel registrations) but the potential environmental impacts are also a function of boat usage and activity (Widmer & Underwood 2004). In the Marlborough Sounds, a significant proportion of boat activity includes small vessels moving between harbours and bays, and anchoring. The intensity of these vessel movements varies widely in intensity among locations and seasons. Correspondingly, any environmental impacts associated with vessel anchoring will likely be highly variable depending on location, season and habitat type. Anchoring on delicate habitats such as sea grasses, even by small boats using low-impact anchors, can have detrimental impacts (Milazzo et al. 2004) but moderate levels of anchoring may only inflict minor and short term impacts on soft-sediment communities (Backhurst & Cole 2000).

The specific effects of other forms of boating impacts including noise, chemical and organic contamination, are largely unknown in the Marlborough Sounds.

## 5. MITIGATING THE EFFECTS OF MOORINGS

### 5.1. Low sensitivity habitats

The simplest method for limiting adverse effects of swing moorings on significant benthic habitats and organisms is to restrict them to locations where these features are absent. As noted in Section 2.2, most swing moorings for small vessels in the Marlborough Sounds are located in sheltered locations with minimal wave exposure, generally near the shore in bays or the fringes of the main reaches of the Sounds. The benthic habitats in these areas often consist of sands and muds, with sediments becoming finer further into bays, where water movement is weakest. Sedentary, surface-living organisms tend to be relatively scarce in these areas, particularly in deeper water, partly because of the lack of substratum to attach to and partly because, in the case of the fauna, many are filter feeders and intolerant of high concentrations of suspended sediment often present in these environments. Biogenic habitats are usually absent for the same reason. The fauna living within the sediment (the 'infauna') is often resilient to disturbance, characterised by relatively high mobility, short generation times and high rates of recruitment and migration. Nevertheless, the infauna can be impacted by the presence of swing mooring, either directly or by alteration of the texture of the sediment (Herbert et al. 2009).

There are, however, exceptions to this lack of surface-living organisms and biogenic habitats in the types of habitat favoured for swing moorings. Horse mussels, scallops, tubeworms (including species that form reefs and beds) and burrowing anemones are characteristic of muddy and muddy sand habitats in the Sounds and other regions of New Zealand. Even where such features are not currently present at a location where swing moorings occur or are proposed, they may have been present historically but were lost because of the presence of moorings or other forms of anthropogenic disturbance, such as dredging and bottom-trawling. For example, Handley (2015, 2016) documented the loss of beds of green-lipped mussels, blue mussels and scallops from soft-sediment areas of the Sounds as a result of human activities (mainly fishing).

A simple method for assessing whether removal of existing moorings or refusal of new ones would allow recovery of significant species or habitats would be to determine whether they already occur within the mooring field (outside of the areas swept by ground chains) or in the area immediately around it.

### 5.2. Appropriate mooring densities

The longer the ground chain on a mooring, the greater the elasticity provided to counter the force of waves, currents and wind but also the greater the area of the seabed swept by the chain. It may be possible to reduce the length of ground chain in

order to decrease the total area of seabed impacted by a given number of moorings in an area. The length of ground chain required for a given size of boat, depth of water, tidal range and sea conditions experienced at a mooring is, however, an engineering question. We are not qualified to determine whether the area impacted by individual moorings could be reduced by altering the length or weight of the ground chain specified in the MDC mooring construction guidelines.

Although the area impacted by a single mooring may be small relative to the total area of similar habitat within a bay or wider area, the total area impacted will obviously increase as the number of moorings in the bay increases. There is no simple answer to the question of what proportion of the total area can be impacted without causing a significant, adverse effect. Sneddon (2010) concluded that mooring scars in Waikawa Bay represented only a minor ecological impact to soft sediment habitat due, in part, to the small benthic areas affected relative to the amount of similar soft sediment habitat in the wider area. The recent multibeam survey of benthic habitats in Queen Charlotte Sound and Tory Channel will show the scale of swing circles, and allow the relative areas of disturbed and undisturbed seabed to be calculated, for any bay in the region. It will also identify places where swing circles intrude into cobble or reef habitat.

### 5.3. Alternatives to block-and-chain mooring systems

**Pole moorings, with the vessel fasted both at the bow and stern, avoid the need for ground chains. They are still likely to exert some impact on the seabed around them, through deposition of fouling organisms that fall off the pole and scour around the base of the pole by water currents. By preventing the vessel from swinging to face winds and currents, pole moorings increase the strain on the mooring. Consequently they are more suited to relatively sheltered environments.**

**Stern-tie moorings (see Section 2.1) reduce the swing of the vessel by fastening the stern to a fixed point on the adjacent shore. The area of seabed affected by the mooring line is therefore limited to a sector of the circle rather than the full circle swept by a block-and-chain mooring.**

**Holding boats in line between fixed buoys attached to a fixed ground line (a 'trot' type mooring) may reduce scour effects because, being fixed at both ends, the ground line is less free to travel over the seabed (Herbert et al. 2009). However, the ground line is not intended to be taut on these moorings and, consequently, there may be some movement of the ground line over the seabed in response to changes in the direction of the forces created by waves, currents and wind. The mooring line attached to the ground chain also consists of chain and this may lie on the seabed at low tide, potentially causing scour.**

Chain-sweep effects can be minimised or avoided by employing mooring systems that have a smaller footprint and keep the mooring tackle off the bottom (e.g. moorings that incorporate an elastic component in the line) (Figure 4). Instead of using a length of chain to absorb the vertical and horizontal forces created by waves, currents and wind, an elastic 'rode' (line) is used to attach the mooring line to the anchor. The elastic rode can be attached to a conventional mooring anchor and the length of the rode designed such that it is short enough to remain suspended off the seabed by the mooring float during low water conditions, but can stretch to accommodate an increase in tide height and the strain of the moored vessel. They can also be used with screw anchors. Due to their expense, such systems are normally only used to reduce vessel swing radii and enable greater mooring densities or to conserve particularly sensitive benthic environments.



Figure 4. Traditional (left) versus elastic (right) mooring ropes. Source: [http://www.atlanticfishhabitat.org/Documents/21981ProtectingEelgrassHabitat-2\\_000.pdf](http://www.atlanticfishhabitat.org/Documents/21981ProtectingEelgrassHabitat-2_000.pdf), accessed 25 October 2017.

The New Zealand Marine Flex<sup>10</sup>, United States Eco-mooring<sup>11</sup> and the Swedish Seaflex<sup>®12</sup> mooring systems are examples of elastic moorings designed to provide progressive resistance to water motion, both vertically and horizontally. These designs consist of a set of elastic hawsers (Figure 5), and the size of the mooring depends on tidal range, wind, waves, currents, water depth and the vessel's air resistance. The inherent elasticity in the line provides greater reduction of shock-loading than a chain.

<sup>10</sup> <http://www.marineflex.com/>

<sup>11</sup> <http://www.boatmoorings.com/eco-mooring.php>

<sup>12</sup> <http://www.seaflex.net/>

The mooring can be attached to an embedded anchor (e.g. a screw anchor) or a gravity anchor.

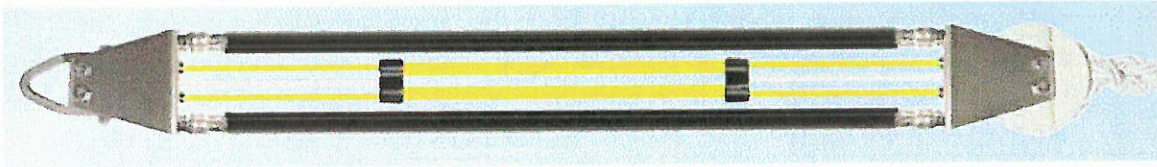


Figure 5. Seaflex<sup>®</sup> mooring, consisting of a parallel series of elastic hawsers. Source: [http://seaflex.s-dev.se/wp-content/uploads/2013/03/Seaflex\\_product\\_sheet\\_English.pdf](http://seaflex.s-dev.se/wp-content/uploads/2013/03/Seaflex_product_sheet_English.pdf), accessed 25 October 2017.

The Australian Seagrass Friendly Mooring System<sup>13</sup> uses a screw anchor, to which the mooring line attaches via a shock absorber. The top of the anchor protrudes ca 30 cm above the seabed and the shock absorber is attached to it by a swivel-head. The shock-absorber consists of a spring inside a cylinder—water is forced out of the cylinder as the spring is compressed, adding further damping. When not under strain, the shock absorber lies horizontally, c. 30 cm above the seabed.

The EzyRider Mooring<sup>14</sup> (also Australian) is made up of a chain connected to an anchor (concrete block or an offset system consisting of three steel stakes driven into the seafloor) and held off the seabed by a large displacement surface buoy. The chain is attached to the buoy by elastic hawsers that absorb the force created by waves, currents and wind and also keeps the chain off the seabed with changing tidal height.

#### 5.4. Habitat change after installation of environmentally friendly moorings

The response of sea grass beds in New South Wales to replacement of block-and-chain moorings with Seagrass Friendly Moorings (see Section 5.3) was studied between 2009 and 2013<sup>15</sup>. This form of mooring allowed sea grass to recolonise previously bare areas created by chain scour (Figure 6). Failure to recolonise in some areas was attributed to higher wave action and sediment movement.

<sup>13</sup> <http://www.seagrassmooring.com.au/>, accessed 25 October 2017.

<sup>14</sup> <http://www.gageroadsdiving.com.au/projects/ezyrider-mooring-and-offset-anchor-system>, accessed 25 October 2017.

<sup>15</sup> <http://www.dpl.nsw.gov.au/fishing/habitat/threats/traditional-boat-moorings-in-sensitive-habitats>, accessed 25 October 2017.

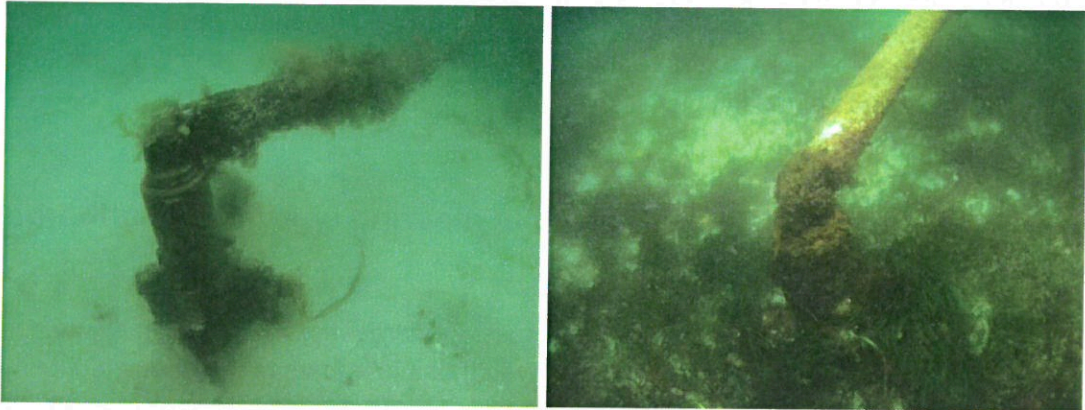


Figure 6. Photographs of a sea grass-friendly mooring taken in 2009 (left) and 2010 showing recovery of sea grass. Source: <https://www.dpi.nsw.gov.au/fishing/habitat/threats/traditional-boat-moorings-in-sensitive-habitats> [credited to Bill Gladstone], accessed 25 October 2017.

A trial of three types<sup>16</sup> of sea grass-friendly moorings in southern Queensland (DEEDI 2011) reported some evidence that the replacement of traditional moorings at four trial locations was 'associated with an overall decrease in the patchiness of the benthic communities'. Fragmentation and increased patchiness of habitats, and the biological assemblages they support, is a general consequence of disturbances such as those caused by chain scour. The short period of the reported study (6–9 months) was not sufficient to determine whether recovery of sea grass, microalgal or microbial cover, and their stabilising effect on the sediment, was likely to occur.

Demers et al. (2013) compared sea grass (predominantly *Posidonia australis*) cover and density in the vicinity of block-and-chain, cyclone and Seagrass Friendly<sup>®</sup> moorings and nearby reference areas without moorings in New South Wales. The cyclone moorings consisted of a central anchor weight with three ground chains radiating out from it to anchors. The Seagrass Friendly<sup>®</sup> mooring had similar sea grass cover to the reference areas, whereas cover was denuded from an area of radius c. 9 m around block-and-chain moorings and c. 18 m around cyclone moorings. There was evidence of recolonisation of denuded areas by the sea grasses *Halophila ovalis* and *Zostera* spp. where Seagrass Friendly<sup>®</sup> moorings had replaced traditional moorings. These taxa are faster to recover from disturbance than the larger, slower-growing *Posidonia*.

As noted in Section 3.1.2, in a study focussed on species that are important prey for wading birds, Herbert et al. (2009) found that recovery of the animals living in the sediment was not complete 15 months after the removal of the surface buoys on swing moorings in southern England. They suggested that this was due to alteration

<sup>16</sup> The three types were the Seagrass Friendly<sup>®</sup> Mooring System, EzyRider Mooring and Seaflex<sup>®</sup> Mooring.

of the sediment by chain sweep. In sheltered environments, deposition of fine sediments is likely to restore the original sediment texture and, in turn, the composition of the infauna.

## 5.5. Expected effects of changes in mooring type in the Marlborough Sounds

Only one species of sea grass (eelgrass, *Zostera muelleri*) occurs in New Zealand and may show similar recovery ability to those members of the genus found in New South Wales (*Z. muelleri* also occurs from Tasmania to southern Queensland) (Demers et al. 2013). Where damage to sea grass by block-and-chain moorings has occurred in the Sounds (if such locations exist), a change to sea grass-friendly moorings may, therefore, result in recovery. If water clarity in the Sounds improves in the future as a consequence of management of other forms of disturbance, the use of sea grass-friendly moorings in areas adjacent to existing beds may allow expansion and (re)colonisation of previously unvegetated areas.

A study of the recovery of benthic biota following the removal of moorings suggests that the process may take some time (more than a year: Herbert et al. 2009). However, studies of areas of seabed beneath mussel farms in Tasman Bay have shown that horse mussels can recolonise previously dredged areas within a year or two (D. Morrissey, pers. obs.). The presence of such habitat-forming species may accelerate the development of associated biological assemblages.

The effects of larger-scale forms of disturbance (dredging, trawling, etc.) may be minimised in the immediate area of the mooring field due to the difficulty of operating equipment near moored vessels and/or the mooring equipment. Nonetheless, the larger-scale forms of disturbance are still expected to have some degree of impact in the mooring field. Where mooring-associated disturbance is reduced or removed, but large-scale disturbance is persistent, seabed recovery may be minimal. However, if larger-scale forms of disturbance were reduced or removed in areas of soft-sediment seabed, mooring chain disturbance would be expected to become relatively more important as a driver of seabed health. Mooring disturbance would then potentially be an important factor to consider with respect to the Marlborough Environment Plan (MEP) objective 8.2: 'An increase in area / extent of Marlborough's indigenous biodiversity and restoration or improvement in the condition of areas that have been degraded'.



## 6. MANAGEMENT GUIDANCE AND RECOMMENDATIONS

MDC would like to understand within which habitat types moorings are appropriate or inappropriate, and situations where more environmentally sensitive mooring systems would be preferable.

### 6.1. Habitats and species sensitive to the effects of different types of mooring

#### 6.1.1. *Block-and-chain moorings*

Any type of habitat or organism that projects above the surrounding seabed is vulnerable to damage by the movement of mooring chains across the bed. Even in areas of soft sediments where organisms living on the surface are predominantly mobile (such as crabs, gastropods, sea stars and sea cucumbers) and therefore able to avoid areas affected by chains, there will be disturbance of the sediment, at least superficially. This disturbance is likely to kill organisms living near the sediment surface and prevent their recolonisation. It may also affect deeper-burrowing species by disrupting their contact with the surface for respiration and feeding. Consequently, block-and-chain moorings are likely to have an adverse effect on all habitats in which they are located, particularly where frequent winds and regular changes in the direction of tidal currents cause the moored vessel to swing on the mooring.

In addition to those discussed in Section 3.1.3, other habitats and species considered to be of particular ecological, cultural or conservation significance and that are likely to be particularly sensitive to the effects of block-and-chain moorings are:

- rocky reefs (moorings are not likely to be located on these substrata but may be close enough that the reef is within the area swept by the chain)
- cobble fields (moorings are not likely to be located on these substrata but may be close enough that the cobble field is within the area swept by the chain)
- macroalgal beds (where these are growing on reef, moorings are not likely to be located within them but may be close enough that the bed is within the area swept by the chain)
- areas of shell hash (shell hash can provide important habitat diversity in soft sediments and chain sweep will enhance rates of breakdown of the hash).

#### 6.1.2. *'Environmentally friendly' and other types of moorings*

Trials in Australia indicate that moorings such as the Marine Flex<sup>®</sup>, Eco-mooring, Seaflex<sup>®</sup>, Seagrass Friendly Mooring<sup>®</sup> and EzyRider Mooring<sup>®</sup> will minimise damage to seabed habitats and organisms providing that the shock-absorbing component

(elastic hawsers or spring) is of an appropriate length to keep the mooring line off the seabed.

Stern-tie moorings limit the swing of the vessel and, thereby, reduce the area of the seabed swept by the ground chain to a sector of a circle with a radius equal to the length of the chain, rather than the full circle.

Pole moorings will also reduce the area of impacted seabed. In this case, the impact will be limited to the area around the pole that is scoured by water movement, the extent of which will depend on local current patterns.

## 6.2. Recommendations for assessing consent applications for moorings

We suggest the following guidelines for assessing consents for moorings:

1. No consents for new moorings in ecologically significant marine sites (ESMS) where the mooring will adversely affect the values on which the significance of the site is based (Davidson et al. 2011).
2. Existing moorings in ESMS to be removed or to be converted to environmentally friendly moorings where the mooring is adversely affecting the values on which the significance of the site is based.
3. Applications for all new consents or **renewal of existing consents shall include a description of habitats in the vicinity of the mooring and identification of significant habitats or species present (see list in Section 6.1.1, to be documented as, for example, video or drop camera images).**
4. New consents in locations outside ESMS but where significant habitats or species are present shall require environmentally friendly moorings.
5. Existing consents in locations with **significant habitats or species shall be converted to environmentally friendly moorings or removed if damage has occurred. This includes cases where a significant species or habitat, such as sea grass or horse mussels, is present within the mooring field but outside of the areas of chain sweep, or in areas around the mooring field, when such species or habitats may be expected to recolonise the impacted areas if ground chains are removed.**
6. Moorings to be consented preferentially in areas of mud or sand seabed with no specific ecological, conservation or traditional value.

Application of these guidelines requires information on the nature of the seabed in the vicinity of the proposed (or existing) mooring and identification of significant habitats and organisms present. At present, the information provided with applications for mooring consents is variable (Peter Johnson, pers. comm., MDC). Some applications

provide information derived from dive surveys of the seabed, including photographs to document the nature of the bed and features present. Guideline 3 is intended to ensure that suitable information is provided with the consent application to allow application of the other guidelines.

Consideration will need to be given to the time frame for implementing the guidelines. Initial efforts should focus on moorings in areas with high-value or rare habitats and species (Guidelines 2 and 3). In locations where damage from moorings has already occurred but recovery or recolonisation may be expected (Guideline 3), replacement with environmentally friendly moorings could be delayed until the consent is due for renewal. The legislative mechanisms available for achieving changes are, of course, also relevant but are beyond the scope of this report.

Guidelines 2 and 3 have already been used in at least one consent decision by MDC. An application for replacement of a mooring consent in Cherry Tree Bay (Catherine Cove, D'Urville Island) sought to increase the swing circle of the mooring, allowing larger vessels to be moored. The mooring lies within ESMS 2.13 (Davidson et al. 2011), which contains dense rhodolith beds in shallow areas from 6–26 m water depth. The consent was granted with the conditions that (among others) the mooring line should include an elastic tackle, and that the applicants should survey the seabed within the new swing circle for the presence of rhodoliths. The use of an elastic tackle is to allow the line to be detached from the block for inspection without the need to lift and replace the mooring block, which is likely to extend the area of impact on the rhodoliths. The applicants must provide a report (including photographs) of the extent, location and health of the rhodolith beds to MDC.

### 6.3. Encouraging the use of environmentally friendly moorings

Interviews with mooring owners and mooring manufacturers conducted as part of the trial of sea grass-friendly moorings in Queensland (DEEDI 2011) suggested, among other things, that accreditation and/or standards for the design of these moorings, and government intervention or facilitation in uptake, would be beneficial. Cost was a key factor in uptake and demonstration of effectiveness and reliability is important to vessel owners. Standards and quality-management systems for the manufacture and installation of moorings would provide confidence to vessel owners and insurers.

A feasibility assessment of **environmentally friendly moorings in New South Wales** (Bowman 2008) noted that these moorings **are expensive compared with block-and-chain moorings**. Even the cheapest type included in the assessment (the **Seagrass Friendly Mooring® System**, described in **Section 5.3**) **was twice the price of a traditional mooring (A\$1,500 versus A\$750 for supply and installation in 2008)**. Bowman (2008) reported that all of the **five proprietary sea grass-friendly moorings**

reviewed have generally performed well, although there were differences in ease of use.

In the New South Wales context, Glasby & West (2015) pointed out that state government policy generally does not support proposals to install new, replace or relocate existing moorings in sea grass beds larger than 5 m<sup>2</sup>. However, in situations where damage to sea grass is permitted, adequate compensation measures are required. Monetary habitat compensation is calculated on a minimum 2:1 basis for sea grasses, which equates to a cost of A\$112/m<sup>2</sup>. Using this monetary value, the average environmental cost of a new block-and-chain mooring in sea grass in estuaries in the Hunter region would be A\$18,368 (based on an average scar area of 164 m<sup>2</sup>, equivalent to 7 m radius). The cost of an effective environmentally friendly mooring (c. A\$3,500 including purchase price and annual maintenance costs) is therefore considerably less than the cost of damage to sea grass based solely on monetary values for habitat compensation.

Glasby and West (2015) suggested that strategies to reduce adverse effects of moorings on sea grass beds, including encouraging the use of sea grass-friendly moorings, could include:

1. Ensuring that block-and-chain moorings are not (accidentally or otherwise) deployed in sea grass beds, which requires accurate positioning of moorings and use of up-to-date maps of sea grass beds.
2. Ensuring that existing block-and-chain moorings are not moved within sea grass beds, either by contractors during maintenance or due to inadequate weight for the size of a vessel or exposure of the mooring site. This would require minimum standards for moorings and accurate co-ordinates for the position of the blocks.
3. Relocating existing block-and-chain moorings out of sea grass beds wherever possible.
4. Where moorings must be in sea grass beds, ensuring that they be environmentally friendly swing moorings that do not scour the seabed.
5. Phasing out of the lawful use of traditional block-and-chain moorings in other sensitive aquatic habitats.
6. Creating the appropriate regulatory and market environment to reduce (or subsidise) the purchase and ongoing cost of environmentally friendly moorings and increase the demand for their use.

As these studies indicate, demonstrating the effectiveness and safety of environmentally friendly moorings in a range of environments and sea conditions is likely to be important in encouraging their use. MDC may wish to consider facilitating the initial use of potentially suitable moorings, in collaboration with mooring manufacturers and installers, vessel owners and other stakeholders.

## 7. ACKNOWLEDGEMENTS

Thanks to Peter Johnson and Steve Ulrich (MDC) and Bruce Lines (Diving Services NZ Ltd) for information and advice.

## 8. REFERENCES

- Backhurst M, Cole R 2000. Biological impacts of boating at Kawau Island, north-eastern New Zealand. *Journal of Environmental Management* 60: 239-251.
- Battershill C 1987. Factors affecting the structure and dynamics of subtidal communities characterised by sponges. Unpublished thesis, ResearchSpace@Auckland.
- Bowman L 2008. Sea grass friendly boat moorings: feasibility assessment. New South Wales Department of Primary Industries, Fisheries Conservation and Aquaculture. 32 p. plus appendices.
- Carbines GD 1993. The ecology and early life history of *Notolabrus celidotus* (Pisces: Labridae) around mussel farms in the Marlborough Sounds. Unpublished MSc thesis, University of Canterbury, Christchurch.
- Chapman MG, Clynick B 2006. Experiments testing the use of waste material in estuaries as habitat for subtidal organisms. *Journal of Experimental Marine Biology and Ecology* 338: 164-478.
- Chapman MG, Underwood AJ 2011. Evaluation of ecological engineering of "armoured" shorelines to improve their value as habitat. *Journal of Experimental Marine Biology and Ecology* 400: 302-313.
- Connell SD 2001. Urban structures as marine habitats: an experimental comparison of the composition and abundance of subtidal epibiota among pilings, pontoons and rocky reefs. *Marine Environmental Research* 52: 115-125.
- Connell SD, Glasby TM 1999. Do urban structures influence local abundance and diversity of subtidal epibiota? A case study from Sydney Harbour, Australia. *Marine Environmental Research* 47: 373-387.
- Corydon Consultants 2012. New Zealanders' perceptions of the Marlborough Sounds in 2012. Corydon Consultants Ltd Report to Marlborough District Council: 53 p.
- Dafforn KA, Mayer-Pinto M, Morris RL, Waltham NJ 2015. Application of management tools to integrate ecological principles with the design of marine infrastructure. *Journal of Environmental Management* 158: 61-73.
- Daly M, Mathieson A 1977. The effects of sand movement on intertidal seaweeds and selected invertebrates at Bound Rock, New Hampshire, USA. *Marine Biology* 43: 45-55.

- Davidson R, Richards L 2015. Significant marine site survey and monitoring programme: Summary 2014-2015. Prepared by Davidson Environmental Limited for Marlborough District Council. Survey and Monitoring Report No. 819. 52 p.
- Davidson R, Richards LA 2016. Significant marine site survey and monitoring programme: Summary report 2015-2016. Prepared by Davidson Environmental Limited for Marlborough District Council. Survey and Monitoring Report No. 836. 57 p.
- Davidson R, Baxter A, Duffy C, Gaze P, DuFresne S, Courtney S, Brosnan B 2015. Reassessment of selected significant marine sites (2014-2015) and evaluation of protection requirements for significant sites with benthic values. Prepared by Davidson Environmental Limited for Marlborough District Council and Department of Conservation. Survey and Monitoring Report No. 824. 39 p.
- Davidson R, Duffy C, Gaze P, Baxter A, DuFresne S, Courtney S, Hamill P 2011. Ecologically significant marine sites in Marlborough, New Zealand. Co-ordinated by Davidson Environmental Limited for Marlborough District Council and Department of Conservation. 172 p.
- Davidson R, Richards L, Duffy C, Kerr V, Freeman D, D'Archino R, Read G, Abel W 2010. Location and biological attributes of biogenic habitats located on soft substrata in the Marlborough Sounds. Prepared by Davidson Environmental Ltd. for Department of Conservation and Marlborough District Council. Research, Survey and Monitoring Report No. 675. 51 p.
- Davidson R, Richards LA, Rayes C, Abel W 2017. Biological monitoring of the ferry route in Tory Channel and Queen Charlotte Sound: 1995-2017. Prepared by Davidson Environmental Limited for Marlborough District Council and Department of Conservation. Survey and Monitoring Report No. 854. 88 p.
- DEEDI 2011. Environmentally friendly mooring trials in Moreton Bay. Queensland Department of Employment, Economic Development and Innovation report to SEQ Catchments. 31 p.
- Demers MA, Davis AR, Knot NZ 2013. A comparison of the impacts of 'sea grass-friendly' boat mooring systems on *Posidonia australis*. Marine Environmental Research 83: 54-62.
- Dernie K, Kaiser M, Richardson E, Warwick R 2003. Recovery of soft sediment communities and habitats following physical disturbance. Journal of Experimental Marine Biology and Ecology 285: 415-434.
- DeVinney J, Volsel L 1978. Effects of sediments on the development of *Macrocystis pyrifera* gametophytes. Marine Biology 48: 343-348.
- Estcourt I 1967. Distributions and associations of benthic invertebrates in a sheltered water soft-bottom environment (Marlborough Sounds, New Zealand). New Zealand Journal of Marine and Freshwater Research 1: 352-370.

- Glasby TM, West G 2015. Estimating losses of *Posidonia australis* due to boat moorings in Lake Macquarie, Port Stephens and Wallis Lake. New South Wales Department of Primary Industries Fisheries Final Report Series No. 147. 30p.
- Green E, Short F (eds) 2003. World atlas of seagrasses: present status and future conservation. United Nations Environment Programme. Berkeley CA, University of California Press. 298 p.
- Hailes SF 2006. Contribution of seagrass (*Zostera muelleri*) to estuarine food webs revealed by carbon and nitrogen stable isotope analysis. Unpublished MSc thesis, University of Waikato, Hamilton.
- Hall, SJ 1994. Physical disturbance and marine benthic communities: life in unconsolidated sediments. *Oceanography and Marine Biology: An Annual Review* 32: 179-239.
- Handley S 2015. The history of benthic change in Pelorus Sound (Te Hoiere), Marlborough. NIWA Client Report No. 2015-001. Prepared for Marlborough District Council. 47 p.
- Handley S 2016. History of benthic change in Queen Charlotte Sound/Totaranui, Marlborough. NIWA Client Report No. 2016-002. Prepared for Marlborough District Council. 66 p.
- Handley S, Gibbs M, Swales A, Olsen G, Ovenden R, Bradley A. 2017. A 1,000 year history of seabed change in Pelorus Sound/Te Hoiere, Marlborough. Prepared for Marlborough District Council, Ministry of Primary industries and the Marine Farming Association. NIWA Client Report 2016119NE.
- Handley SJ, Willis TJ, Cole RG, Bradley A, Cairney DJ, Brown SN, Carter ME 2014. The importance of benchmarking habitat structure and composition for understanding the extent of fishing impacts in soft sediment ecosystems. *Journal of Sea Research* 86: 58-68.
- Hastings K, Hesp P, Kendrick GA 1995. Seagrass loss associated with boat moorings at Rottne Island, Western Australia. *Ocean & Coastal Management* 26: 225-246.
- Herbert RJH, Crowe TP, Bray S, Sheader M 2009. Disturbance of intertidal soft sediment assemblages caused by swinging boat moorings. *Hydrobiologia* 625: 105-116.
- Herbert R, Crowe T, Bray S, Sheader M 2009. Disturbance of intertidal soft sediment assemblages caused by swinging boat moorings. *Hydrobiologia* 625: 105-116.
- Jennings S, Pinnegar JK, Polunin NV, Warr KJ 2001. Impacts of trawling disturbance on the trophic structure of benthic invertebrate communities. *Marine Ecology Progress Series* 213: 127-142.

- Jones J 1992. Environmental impact of trawling on the seabed: a review. *New Zealand Journal of Marine and Freshwater Research* 26: 59-67.
- Lohrer AM, Hewitt JE, Thrush SF 2006. Assessing far-field effects of terrigenous sediment loading in the coastal marine environment. *Marine Ecology Progress Series* 315: 13-18.
- Lundquist CJ, Pritchard M, Thrush S, Hewitt JE, Greenfield BL, Halliday JM, Lohrer AM 2013. Bottom disturbance and seafloor community dynamics: development of a model of disturbance and recovery dynamics for marine benthic ecosystems. Prepared for Ministry for Primary Industries. Cawthron Report No. New Zealand Aquatic Environment and Biodiversity Report No. 118. 59 p.
- Lythgoe JN 1979. *Ecology of vision*. Oxford science publications. Oxford, Clarendon Press. 244 p.
- MacDiarmid A, McKenzie A, Sturman J, Beaumont J, Mikaloff-Fletcher S, Dunne J 2012. Assessment of anthropogenic threats to New Zealand marine habitats. Prepared for Ministry for Primary Industries. New Zealand Aquatic Environment and Biodiversity Report No. 93. 255 p.
- Marbà N, Duarte CM 1994. Growth response of the seagrass *Cymodocea nodosa* to experimental burial and erosion. *Marine Ecology Progress Series*: 307-311.
- Matheson F, Dos Santos V, Inglis G, Pilditch C, Reed J, Morrison M, Lundquist C, Van Houte-Howes K, Hailes S, Hewitt J 2009. New Zealand seagrass - General Information Guide. NIWA Information Series No. 72. 16 p.
- Milazzo M, Badalamenti F, Ceccherelli G, Chemello R 2004. Boat anchoring on *Posidonia oceanica* beds in a marine protected area (Italy, western Mediterranean): effect of anchor types in different anchoring stages. *Journal of Experimental Marine Biology and Ecology* 299: 51-62.
- Morrison M, Jones EG, Consalvey M, Berkenbusch K 2014. Linking marine fisheries species to biogenic habitats in New Zealand: a review and synthesis of knowledge. Ministry for Primary Industries. New Zealand Aquatic Environment and Biodiversity Report No. 130. 156 p.
- Morrison MA, Lowe M, Parsons D, Usmar N, McLeod I 2009. A review of land-based effects on coastal fisheries and supporting biodiversity in New Zealand. New Zealand Aquatic Environment and Biodiversity Report No. 37. 100 p.
- Newell RI, Koch EW 2004. Modeling seagrass density and distribution in response to changes in turbidity stemming from bivalve filtration and seagrass sediment stabilization. *Estuaries and Coasts* 27: 793-806.
- Norkko A, Thrush SF, Hewitt JE, Cummings VJ, Norkko J, Ellis JI, Funnell GA, Schultz D, MacDonald I 2002. Smothering of estuarine sandflats by terrigenous clay: the role of wind-wave disturbance and bioturbation in site-dependent macrofaunal recovery. *Marine Ecology Progress Series* 234: 23-41.



- OCEL undated. Swing mooring design report. OCEL Consultants NZ Ltd. Prepared for Waikato Regional Council. 13 p. plus appendices.
- Parnell K, McDonald S, Burke A 2007. Shoreline effects of vessel wakes, Marlborough Sounds, New Zealand. *Journal of Coastal Research* 50: 502-506.
- Posey M, Lindberg W, Alphin T, Vose F 1996. Influence of storm disturbance on an offshore benthic community. *Bulletin of Marine Science* 59: 523-529.
- Queirós A, Hiddink J, Kaiser M, Hinz H 2006. Effects of chronic bottom trawling disturbance on benthic biomass, production and size spectra in different habitats. *Journal of Experimental Marine Biology and Ecology* 335: 91-103.
- Russell LK, Hepburn CD, Hurd CL, Stuart MD 2008. The expanding range of *Undaria pinnatifida* in southern New Zealand: distribution, dispersal mechanisms and the invasion of wave-exposed environments. *Biological Invasions* 10: 103-115.
- Scavia D, Field JC, Boesch DF, Buddemeier RW, Burkett V, Cayan DR, Fogarty M, Harwell MA, Howarth RW, Mason C 2002. Climate change impacts on US coastal and marine ecosystems. *Estuaries* 25: 149-164.
- Shaffer J, Parks D 1994. Seasonal variations in and observations of landslide impacts on the algal composition of a Puget Sound nearshore kelp forest. *Botanica Marina* 37: 315-324.
- Simpson H 2016. The Marlborough District Council bans seabed trawling and dredging at ecologically significant marine sites. Retrieved 02/11, from <http://www.stuff.co.nz/dominion-post/business/82195988/The-Marlborough-District-Council-bans-seabed-trawling-and-dredging-at-ecologically-significant-marine-sites>.
- Simpson SL, Apte SC, Batley GE 1998. Effect of short-term resuspension events on trace metal speciation in polluted anoxic sediments. *Environmental Science & Technology* 32: 620-625.
- Sloth NP, Riemann B, Nielsen LP, Blackburn T 1996. Resilience of pelagic and benthic microbial communities to sediment resuspension in a coastal ecosystem, Knebel Vig, Denmark. *Estuarine, Coastal and Shelf Science* 42: 405-415.
- Smith AM, McGourty CR, Kregting L, Elliot A 2005. Subtidal *Galeolaria hystrix* (Polychaeta: Serpulidae) reefs in Paterson Inlet, Stewart Island, New Zealand. *New Zealand Journal of Marine and Freshwater Research* 39: 1297-1304.
- Sneddon R 2010. Assessment of potential effects on benthic ecology from proposed rezoning of areas in Waikawa Bay. Prepared for Port Marlborough New Zealand Limited. Cawthron Report No. 1615. 25 p.
- Sneddon R, Dunmore R, Barter P 2008. Proposed expansion of Waikawa Marina: assessment of effects on benthic ecology. Prepared for Sounds Property Holdings Ltd. Cawthron Report No. 1450. 71 p.

- Stevens L, Robertson B 2014. Havelock Estuary 2014, broad scale habitat mapping. Wriggle Coastal Management. Prepared for Marlborough District Council. 51 p.
- Stewart J 1983. Fluctuations in the quantity of sediments trapped among algal thalli on intertidal rock platforms in southern California. *Journal of Experimental Marine Biology and Ecology* 73 (3): 205-211.
- Stewart JG 1989. Establishment, persistence and dominance of *Corallina* (Rhodophyta) in algal turf. *Journal of Phycology* 25: 436-446.
- Stocker T 2014. Climate change 2013: the physical science basis: Working Group I contribution to the fifth assessment report of the Intergovernmental Panel on Climate Change. Cambridge University Press.
- Tuck ID, Hewitt JE, Handley SJ, Lundquist CJ 2017. Assessing the effects of fishing on soft sediment habitat, fauna and process. Ministry for Primary Industries. New Zealand Aquatic Environment and Biodiversity Report No. 178. 122 p. plus appendices.
- Unsworth RKF, Williams B, Jones BL, Cullen-Unsworth LC 2017. Rocking the boat: damage to eelgrass by swinging boat moorings. *Frontiers in Plant Science* 8: 1309. Doi: 10.3389/fpls.2017.01309.
- Ulrich S 2015. Mitigating fine sediment from forestry in coastal waters of the Marlborough Sounds. Marlborough District Council Technical Report No. 15-009.
- Wainright S, Hopkinson Jr C 1997. Effects of sediment resuspension on organic matter processing in coastal environments: a simulation model. *Journal of Marine Systems* 11: 353-368.
- Walker DI, Lukatelich RJ, Bastyan G, McComb AJ 1989. Effect of boat moorings on sea grass beds near Perth, Western Australia. *Aquatic Botany* 36: 69-77.
- Widdicombe S, Austen MC, Kendall MA, Olsford F, Schaanning MT, Dashfield SL, Needham HR 2004. Importance of bioturbators for biodiversity maintenance: indirect effects of fishing disturbance. *Marine Ecology Progress Series* 275:1-10.
- Widmer W, Underwood A 2004. Factors affecting traffic and anchoring patterns of recreational boats in Sydney Harbour, Australia. *Landscape and Urban Planning* 66: 173-183.
- Wittenberg M, Hunte W 1992. Effects of eutrophication and sedimentation on juvenile corals. *Marine Biology* 112: 131-138.
- Woods CM, Schiel DR 1997. Use of seagrass *Zostera novaezelandica* (Setchell, 1933) as habitat and food by the crab *Macrophthalmus hirtipes* (Heller, 1862) (Brachyura: Ocypodidae) on rocky intertidal platforms in southern New Zealand. *Journal of Experimental Marine Biology and Ecology* 214 (1-2): 49-65.

Wright JP, Jones CG 2006. The concept of organisms as ecosystem engineers ten year on: progress, limitations, and challenges. *BioScience* 56:203-209.

## 9. APPENDICES

### Appendix 1. MDC Mooring construction guidelines<sup>17</sup>

#### Construction Specifications

Mooring Class	Vessel Length	Block Weight	Ground Chain Diameter (mm)	Mooring Chain Diameter (mm)	Rope Diameter (mm)
Class A	Up to 6 metres	1 tonne	24	16	20
Class B	6 – 12 metres	2 tonnes	32	20	20
Class C	12 – 16 metres	3 tonnes	38	20	24
Class D	16 – 18 metres	4 tonnes	38	20	28
Class E	> 18 metres	Vessel specific design by a chartered professional engineer with experience in mooring structures.			

1. Shallow water moorings in a depth of 5 metres or less to be designed to suit with respect to these guidelines.
2. Total length of the chain to be the depth of water at mean high water springs with one third of this chain to be ground chain. (*see below*)
3. Length of the rope to be equal to the depth of water at mean high water springs. (*see below*)  
The total length of the mooring tackle should be equal to twice the water depth at Mean High Water Springs at the mooring site. Generally, mooring tackle consists of a combination of chain and rope totalling twice the water depth.
4. All shackles must be welded.
5. Swivels may be used at the mooring provider's discretion, but where these are used, the size of the swivel must be commensurate with that of the chain.
6. Anodes may be used at the mooring provider's discretion.
7. All mooring blocks must be designed by a Chartered Professional Engineer with expertise in mooring structures and be made to those specifications.
8. Similar metals are to be used throughout.
9. Moorings of different design and/or manufacture will be considered on a case by case basis. As a minimum, such moorings must be supported by appropriate Chartered Professional Engineer design drawings and certification.

<sup>17</sup> Downloaded 10-10-2017 from:  
<https://www.marlborough.govt.nz/repository/libraries/id:1w1mps0ir17q9sgxanf9/hierarchy/Documents/Services/RC%20-%20Applying%20for%20a%20RC%20-%20Supporting%20Information/F.%20RAF0021%20Supplementary%20Information%20Swing%20or%20Stern%20Tie%20Mooring.pdf>.

# Tasman District: Boat Moorings and Coastal Structures

---

VISUAL, NATURAL CHARACTER AND LANDSCAPE EFFECTS ASSESSMENT

December 2018

FINAL

Prepared for Tasman District Council by

bridgetgilbert  
landscape architecture



# Contents

1.0	Introduction	1
2.0	Executive Summary	5
3.0	Mooring Area: Mangarakau Wharf	6
4.0	Mooring Area: Milnthorpe (Parapara Estuary)	13
5.0	Mooring Area: Boundary Bay (ATNP)	18
6.0	Mooring Area: Glasgow Bay (ATNP)	21
7.0	Mooring Area: Otuwhero Inlet, Marahau (ATNP)	25
8.0	Mooring Area: Kaiteriteri	31
9.0	Mooring Area: Stephens Bay	37
10.0	Mooring Area: Tapu Bay	41
11.0	Mooring Area: Moutere Inlet: Sand Spit Delta	44
12.0	Mooring Area: Moutere Inlet: Marina	50
13.0	Mooring Area: Mapua	55
14.0	Coastal Structures: Rakāuroa / Torrent Bay (ATNP)	62
15.0	Coastal Structures: Marahau (ATNP)	64
16.0	Coastal Structures: Bark Bay (ATNP)	66
17.0	Coastal Structures: Mosquito Bay (ATNP)	68
18.0	Coastal Structures: Watering Cove (ATNP)	70
19.0	Coastal Structures: Awaroa (ATNP)	71
20.0	Cumulative Effects	72
	Appendix 1: Assessment of Landscape and Visual Effects	73

# Figures

Figure 1: Approximate location of proposed mooring areas and coastal structures	4
Figure 2: Proposed Mooring Area (source: TDC).	7
Figure 3: Proposed mooring area (source: TDC).	14
Figure 4: Proposed mooring area at Milnthorpe (Parapara Estuary) (source: Davidson Environmental Report (April 2015)).	14
Figure 5: Proposed mooring area (source: TDC).	19
Figure 6: Proposed mooring area (source:TDC).	22
Figure 7: Proposed mooring area (source:TDC).	26
Figure 8: Proposed mooring area at Otuwhero Inlet (Marahau) – Source: Davidson Environmental Report (April 2015)	29

Figure 9: Proposed mooring area (source: TDC).	33
Figure 10: Proposed mooring area (source: TDC).	38
Figure 11: Proposed mooring area (source: TDC).	42
Figure 12: Proposed mooring area at Tapu Bay – Source: Davidson Environmental Report (April 2015).	42
Figure 13: Proposed mooring area (source: TDC).	45
Figure 14: Proposed mooring area at Moutere Inlet Sand Spit Delta (to the right of image). Source: Davidson Environmental Report (April 2015)	45
Figure 15: Proposed mooring area (source: TDC).	51
Figure 16: Proposed mooring area at Moutere Inlet Marina (to the left of image). Source: Davidson Environmental Report (April 2015)	51
Figure 17: Proposed mooring area (source:TDC).	56



## 1.0 Introduction

1.1 The following Visual, Natural Character and Landscape Assessment has been prepared by Bridget Gilbert Landscape Architecture Limited (**BGLA**) for Tasman District Council (**TDC**) as part of their review of the Tasman Resource Management Plan (**TRMP**) provisions in relation to boat mooring management and coastal structures within the Abel Tasman National Park (**ATNP**).

### Proposed Mooring Areas

1.2 The proposed boat mooring areas generally relate to existing consented and unconsented or expired swing and fixed mooring areas.

1.3 The proposed boat mooring areas are summarised as follows:

- a. Mangarakau Wharf: new mooring area adjacent wharf (outside marine reserve) and boat ramp where two unconsented or expired moorings are evident.
- b. Milnthorpe: establish new existing mooring area to the west of the wharf. New mooring area coincides with 3 unconsented swing moorings. 3 consented swing moorings and 1 unconsented fixed mooring outside the new mooring area.
- c. Boundary Bay (ATNP): new mooring area coincides with 9 consented swing moorings.
- d. Glasgow Bay (ATNP): new mooring area coincides with 11 consented swing moorings and 1 unconsented mooring. 5 unconsented and 1 consented fixed moorings in Torrent Bay Estuary (near Glasgow Bay)
- e. Otuwhero Inlet, Marahau (ATNP): new mooring area coincides with 12 unconsented swing moorings. 9 unconsented swing moorings outside the proposed mooring area. 2 unconsented fixed moorings outside the proposed mooring area.
- f. Kaiteriteri: two new mooring areas comprising of: a seasonal summer public mooring area (November to April); 2 permanent swing moorings and a commercial vessel mooring area. The proposed mooring areas generally coincide an existing seasonal mooring area (including 13 seasonal moorings, 2 permanent swing moorings, 1 seasonal warden's launch mooring and 1 seasonal mooring for the public swimming platform) and 6 consented moorings (one of which is solely used for a water pipe which brings fresh water across the foreshore/seabed and is suspended on a buoy). 3 unconsented swing moorings outside the proposed mooring areas.
- g. Stephens Bay: extension to the existing mooring area (to be retained) that incorporates all of the existing consented moorings in the area. New mooring area coincides with 2 consented swing moorings. 8 consented swing mooring in existing mooring area to be retained.

- h. Tapu Bay: new mooring area coincides with 7 unconsented swing moorings. 8 unconsented moorings outside the proposed mooring area.
- i. Moutere Inlet Sand Spit Delta: new mooring area coincides with 17 unconsented swing moorings. 13 unconsented moorings outside the proposed mooring area.
- j. Moutere Inlet Marina: new (reduced) mooring area coincides with 2 consented swing moorings and 24 unconsented swing moorings.
- k. Mapua: new (amended) mooring area coincides with 28 consented swing moorings and 5 unconsented swing moorings.

1.4 Broadly speaking, the TMRP Review seeks to reconfirm or formalise existing mooring activities where they are considered to be appropriate, and in some instances, an increase or a decrease in the extent of mooring area is proposed.

1.5 It is intended that mooring within the new mooring areas will be a permitted activity subject to the mooring owner holding a licence issued by the Harbourmaster. Mooring licences will be issued in accordance with the provisions in a new section within the Navigation and Safety Bylaw. The licences will specify location, design and maintenance requirements etc. Moorings licences will be allocated first to those with consented moorings within the moorings area, then to public use moorings, with the remainder allocated on a 'first come first served' basis. The licences will be issued up to 5 years at a time. A concurrent bylaw process will also introduce a formal 'wait list' process once the mooring area is full.

1.6 The draft plan change also includes new provisions which promote and enable more efficient use of space in the CMA. This is achieved through policy encouraging the establishment of public moorings (over private); enabling more efficient mooring systems to be considered (e.g. fore and aft, mediterranean and sea flex); and to provide flexibility to optimise the mooring layout within moorings areas.

1.7 The location, extent and arrangement of the proposed mooring areas considered in this assessment has been determined through a detailed ecological assessment (referred to hereafter as the Davidson Environmental Report<sup>1</sup>), a detailed shorebird study (where relevant, and referred to hereafter as the Melville Report<sup>2</sup>) and public consultation.

### Coastal Structures

1.8 The coastal structures assessed in this report relate to existing unauthorised public walkway, signage and pipe structures within the ATNP at:

- a. Torrent Bay/Rakauroa jetty.
- b. Marahau.

<sup>1</sup> *Biological report in relation to proposed mooring areas located between Waimea Inlet and Whanganui Inlet: biological features, habitats and issues* (report no. 806), prepared for Tasman District Council by Davidson Environmental Limited, April 2015.

<sup>2</sup> *Assessment of Shorebird Use of Proposed Boat Mooring Sites at Otuwhero/Marahau and Motueka Report*, prepared for Tasman District Council by D.S. Melville, April 2015.

- c. Bark Bay.
- d. Mosquito Bay.
- e. Watering Cove.
- f. Awaroa.

1.9 The draft plan change proposes to provide for these structures as a permitted activities.

### Statutory Context

1.10 All of the mooring areas and coastal structures are located within the coastal environment triggering consideration of RMA s6(a) which requires as a matter of national importance, the preservation of the natural character of the coastal environment, and the protection of it from inappropriate subdivision, use and development.

1.11 In turn, consideration of Policy 13 of the New Zealand Coastal Policy Statement 2010 (**NZCPS**) is also of relevance to this assessment which seeks to:

- preserve the natural character of the coastal environment and protect it from inappropriate subdivision, use and development;
- avoid adverse effects of activities on natural character in areas of the coastal environment with outstanding natural character (see comment below);
- avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of activities on natural character in all other areas of the coastal environment.

1.12 Also of relevance is Policy 15 Natural Features and Natural Landscapes:

*To protect the natural features and natural landscapes (including seascapes) of the coastal environment from inappropriate subdivision, use, and development:*

- (a) *avoid adverse effects of activities on outstanding natural features and outstanding natural landscapes in the coastal environment; and*
- (b) *avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of activities on other natural features and natural landscapes in the coastal environment.*

1.13 Whilst TDC has not formalised their mapping of Outstanding Natural Landscapes (ONLs) for the District, it is expected that all (or by far, the majority) of ATNP is likely to qualify as an ONL.

1.14 Further, Whanganui Inlet is identified as an Outstanding Natural Feature (ONF) in the Small Working Group: Landscape Project Report (October 2016).<sup>3</sup> Whilst the latter has not been adopted by Council, for

the purposes of this assessment a cautious approach has been adopted and consideration of RMA s(6)b which requires as a matter of national importance, the protection of ONLs from inappropriate development is considered to be relevant.

1.15 Accordingly, NZCPS Policy 15 is of relevance to mooring areas and structures within ATNP and the Whanganui Inlet:

*To protect the natural features and natural landscapes (including seascapes) of the coastal environment from inappropriate subdivision, use, and development:*

- (a) *avoid adverse effects of activities on outstanding natural features and outstanding natural landscapes in the coastal environment; and*
- (b) *avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of activities on other natural features and natural landscapes in the coastal environment.*

1.16 It is the author's understanding that *King Salmon*<sup>4</sup> allows minor or transitory adverse effects within coastal ONLs.

### Project Approach

1.17 The following approach was adopted in the preparation of this 'landscape' assessment:

- Background reading of briefing material supplied by TDC (September 2018).
- Site visit by air and water with TDC policy team (September 2018).
- Site visit by land (excepting ATNP sites) (October 2018);
- Preparation of DRAFT Visual, Natural Character and Landscape Effects Assessment report utilising the effects methodology outlined in **Appendix 1**.
- Review of draft report with project team.
- Preparation of FINAL Visual, Natural Character and Landscape Effects Assessment report.

1.18 The following assessment report is structured such that the 'landscape' effects of each of the new mooring areas are discussed, followed by the landscape effects of each ATNP coastal structure.

1.19 **Figure 1** overleaf shows the approximate location of the proposed mooring areas and coastal structures discussed in this report.

<sup>3</sup> It should be noted that this report provides the most up-to-date and comprehensive evaluation of ONLs and ONFs within the Golden Bay area at the time of preparing this assessment.

<sup>4</sup> SC 82/2013 [2014] NZSC 38.

## Assumptions

### 1.20 The following assumptions underpin the 'landscape' assessment:

- a. Mooring buoys are relatively small compared with mussel buoys. They must be visible to other craft for safety reasons and they must meet standard specifications to meet either licensing or resource consenting requirements.
- b. Many existing mooring buoys, whether authorised / consented or not, are used intermittently. At Kaiteriteri an area of buoys are removed for the winter season.
- c. There is a relatively limited difference in visual impact between a boat moored to a buoy, and a boat at anchor. Whilst moored vessels typically display a denser patterning in comparison to anchored vessels, generally both activities read as a relatively spacious and informal patterning of marine craft. Anchoring of craft is a permitted activity, however restrictions can be imposed under the Navigation Bylaw (noting that the main bylaw is now operative with the mooring section still in draft).
- d. The visual impact is likely to be greater in those existing and proposed mooring areas that do not have 'all tide' capacity. The following mooring areas have 'all tide' capacity – Mapua (except some parts of Grossi Point), Stephens Bay, half of Kaiteriteri, Glasgow / Torrent Bay, Boundary Bay, and Mangarakau. The following mooring areas tend to varying degrees of dryness at low tide – Milnthorpe, Otuwhero Inlet, the section of Kaiteriteri closest to the foreshore, Tapu Bay, Mouteka 2, Motueka 1, and a small part of Mapua at Grossi Point.
- e. Generally boats on swing moorings are considered to be a relatively benign visual element within the context of a seascape that is highly valued for recreational boating as they tend to read as a relatively spacious patterning of vessels bobbing around in the water. However the scale of the mooring area is critical in this regard, and where the patterning of moored vessels creates the impression of a coastline or bay being 'hemmed in' by moored craft, the outcome is less favourable (from a landscape perspective).
- f. Mooring areas tend to be relatively dynamic in nature due to the dynamic nature of the seabed and water. In some instances it is likely that the environment described in this report may have changed since the time of writing such that existing moored vessels are positioned in different locations due to changing seabed and/or sea conditions and/or the number of vessels moored has changed over time. In general, the description of the location and number of vessels moored at each location derives from the Davidson Environmental Report, although in some instances Council have provided updated information in this regard.



## 2.0 Executive Summary

### Proposed Mooring Areas

- 2.1 All of the proposed new mooring areas are located in parts of the Tasman coastline where moorings activities currently form an established part of the visual and physical environment. They also coincide with areas identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 2.2 The extent of the new mooring areas have been carefully considered to formalise existing unconsented activities and only provide for additional mooring capacity where public consultation has identified a need. It is fair to say that a relatively cautious approach to new mooring areas has therefore been applied.
- 2.3 Further, all new mooring areas avoid parts of the CMA where noteworthy ecological values have been identified (refer Davidson Environmental Report 2015 and Melville Report 2015).
- 2.4 For the more undeveloped and very high landscape value locations where new mooring areas are proposed (Mangarakau Wharf, Boundary Bay and Glasgow Bay), the existing visual presence of moorings in the area (suggesting a contextual and visual 'fit'), together with the very limited extent of the proposed mooring area and the dominance of the more natural landscape context are such that adverse visual, natural character and landscape effects are assessed as **negligible**. Importantly, the proposed mooring areas will not detract from the high landscape values associated with each of these areas.
- 2.5 At Milnthorpe, Otuwhero Inlet, Kaiteriteri, Stephens Bay, Tapu Bay, Moutere sand spit, Moutere marina, and Mapua, again the existing visual presence of moorings suggests a contextual and visual 'fit'. The land based development adjacent the mooring areas adds to this contextual 'fit' although suggests a potentially greater sensitivity in terms of visual effects. The limited extent of new mooring areas and their confinement to areas where such activities currently prevail means that the proposed development will not detract from the character and quality of the outlook enjoyed from the surrounding area. Overall, adverse visual, natural character and landscape effects in these locations are assessed as **negligible**.

### Coastal Structures

- 2.6 The coastal structures for which consent is sought all sit within (or adjacent to) ATNP and relates to steps, water pipes and track markers associated with the recreation use of the national park and adjacent CMA.
- 2.7 It is expected that an ONL classification applies to most, if not all, of ATNP. The waters of Mosquito Bay have been identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 2.8 The generally modest scale and visually recessive character of the structures, together with their long accepted functional 'benefit' (which confers a visual 'logic' to them) means that they do not detract from the character or quality of the visual setting within which they are located.
- 2.9 The track marker poles are inevitably more visible, however they form a long established landscape element that facilitate safe passage across estuarine areas at low tide.

- 2.10 Unsurprisingly, the existence of these structures has not precluded the wider area rating as having High Natural Character.
- 2.11 Further, all of these structures represent and enable the recreational characteristics for which the local area is so highly valued. In this way, these structures contribute positively to the landscape character and 'sense of place' of the local area.
- 2.12 On balancing these considerations, adverse visual, natural character and landscape effects associated with the coastal structures are assessed to be **negligible**.

### Cumulative Effects

- 2.13 With respect to cumulative adverse 'landscape' effects, the extensive scale of the Tasman District coastline and the generously spaced arrangement of the proposed mooring areas will ensure that the Tasman District coastline does not read as dominated by moored vessels.
- 2.14 The very discreet nature of the proposed coastal structures, together with their spacious arrangement within ATNP will ensure that they do not read as a dominant coastal element within this stretch of the District's coastline.

### 3.0 Mooring Area: Mangarakau Wharf

- 3.1 Mangarakau Wharf is located within the Whanganui Inlet on the west coast of the District. The inlet is an enclosed, drowned river valley about 13 km long and between 2-3 km wide (approximately 2,774ha). As the tide enters the inlet, it divides into northeast and southwest channels before spilling out onto expansive intertidal sandflats, which dominate the estuary. The inlet is framed by a highly convoluted coastline and flanked by a variety of forest types.
- 3.2 Habitation is limited to a small settlement at Rakopi and isolated houses/tourist accommodation. Other modification is limited to grazing land use, power lines, unsealed roading including a series of causeways across several of the narrower inlet ‘arms’.
- 3.3 The inlet was the first estuary in New Zealand to be protected by a combination of Marine Reserve and Wildlife Management Reserve (1994) and is today considered to be the best example of an estuary in a relatively intact and natural state in the Nelson/Marlborough area.
- 3.4 Seagrass beds, salt marshes, tidal wetlands, dunes, cliffs, islands, rock platforms and underwater reefs are all found within the marine reserve and are important habitat to a variety of species.
- 3.5 About 30 species of marine fish use the inlet at some stage of their life cycle, and it is an important breeding and nursery area for snapper, flatfish, and kahawai. Many fish enter the estuary to take advantage of the rich food supply found in the seagrass beds and sandflats.
- 3.6 It is understood that the area is important to Maori, both as a food basket and as a place to live. Sacred sites and evidence of previous occupation remain today.
- 3.7 As explained previously, the area is identified as an Outstanding Natural Feature (ONF) in the Small Working Group: Landscape Project Report (October 2016). The area has also been identified in a District wide Natural Character Assessment to rate as having Outstanding Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 3.8 Mangarakau Wharf (permitted) and the associated reclamation (including a number of small buildings and a launching ramp), is a near derelict structure that is owned by the Crown and is under the control of the Department of Conservation. Maori discovered gold in 1862, prompting an influx of eager prospectors to the Anatori River catchment. In 1866 the West Whanganui Coal Company began mining, and coal was shipped out from the inlet. From 1900 onwards the goldminers were being joined by an influx of people who came to work in the timber industry, farming, flax milling, road making and associated services. A flourishing community established at Mangarakau. The current concrete wharf was a government project from the 1950’s when it was thought that there might be a need for a substantial structure for export of timber and coal but was never completed or decked. Alongside the wharf is a small reclamation which contains the scow Kohi. The Kohi (built in 1911) was towed to the site and beached sometime after her sinking in 1962.
- 3.9 Two unconsented or expired moorings are located within the channel near the (existing) wharf and boat ramp, and also coincide with the proposed mooring area.
- 3.10 The regenerating bush dominated context of the majority of the inlet surrounds, together with the highly complex patterning of the coastline and hills enclosing the area serves to limit and/or frame views from many locations. In some locations (for example as one crosses the causeway) more open views are available, however even here, the configuration of the landform patterning means the view tends to be confined to a specific part of the inlet, rather than the area as a whole. In general, the Mangarakau Wharf area is relatively visually discreet and does not play an important role in shaping the character of the wider inlet ‘landscape’.
- 3.11 The proposed mooring area is configured to sit outside of the marine reserve and encompasses the subtidal channel only (i.e. the intertidal area is excluded, consistent with the recommendation in the Davidson Environmental Report to exclude areas where there is sea grass).
- 3.12 The proposed mooring area seeks to provide for existing unconsented moorings in the vicinity plus a limited extent of additional moorings to provide for the local community. The area is an important safe haven for marine craft along the west coast and is also the launch and marshalling point for search and rescue operations.
- 3.13 The presence of existing (albeit unconsented or expired) moorings within the vicinity suggests a certain tolerance for this sort of activity within the ONF identified by the Small Working Group project team i.e. the presence and character of this ‘development’ was not such that it tipped the balance to an extent that the inlet ONF no longer qualified as either ‘natural’ or ‘outstanding’.
- 3.14 The location of the proposed mooring area close to the existing wharf structure, reclamation and boat ramp facilities, and outside of the marine reserve is sympathetic to the intentions of avoiding adverse natural character and landscape effects.
- 3.15 Further, the very limited extent of the proposed mooring area, together with the limited visual ‘importance’ of the wharf area (as explained above) and the existing visual presence of moorings in the area, means that the proposed development will not detract from the character and quality of views across this part of the estuary from surrounding roads, tracks and the water. The highly convoluted nature of the inlet also plays a role in this regard, serving to limit the extent of the surroundings from which the mooring area will be visible.
- 3.16 The acceptability of the location in terms of marine ecology effects as outlined in the Davidson Environmental Report in conjunction with the contextual and visual ‘fit’ described above will ensure that adverse natural character effects and landscape effects (including visual effects) are avoided.
- 3.17 On balancing these considerations, adverse visual, natural character and landscape effects associated with the proposed mooring area at Mangarakau Wharf are assessed as **negligible**.

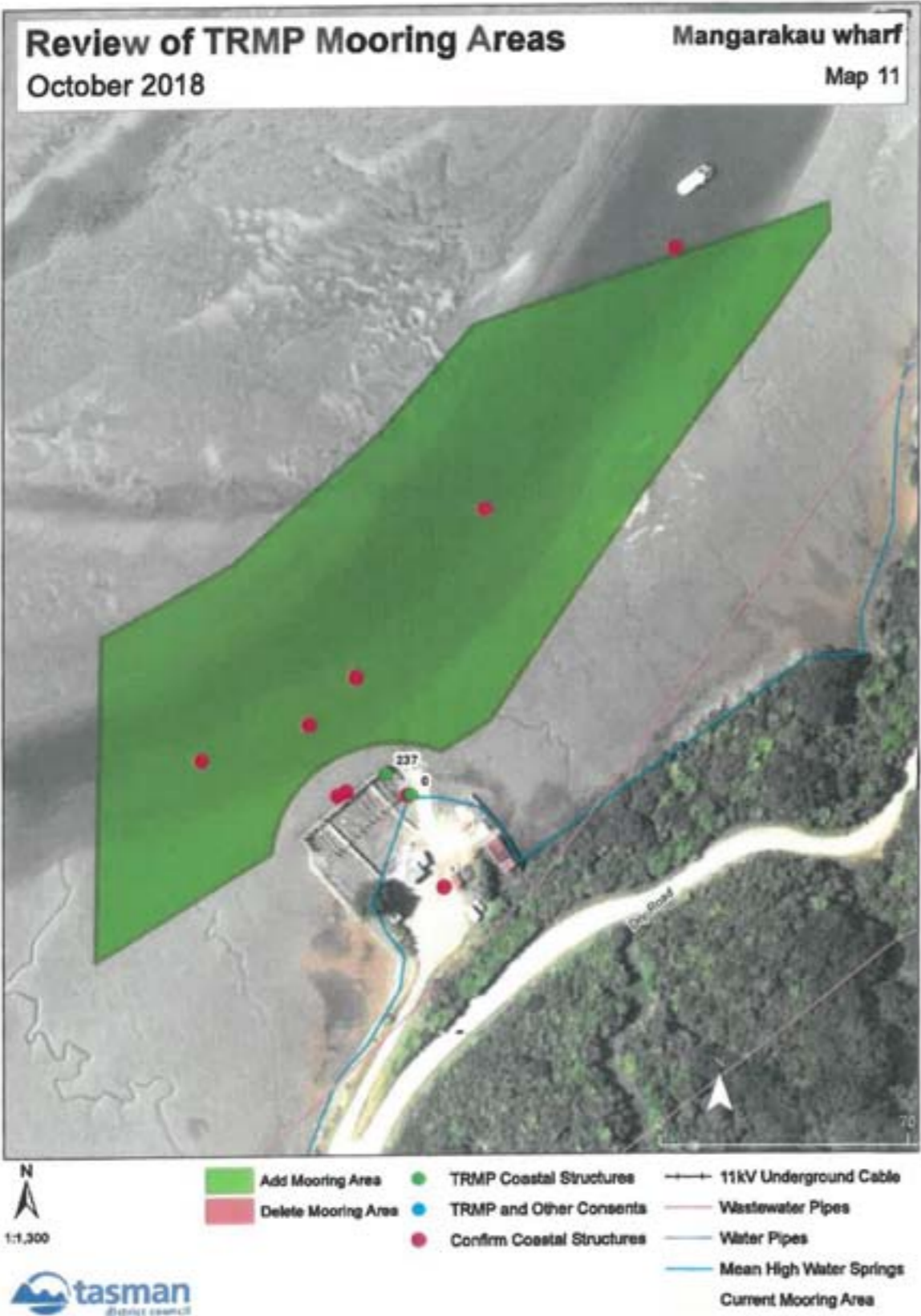


Figure 2: Proposed Mooring Area (source: TDC).



Photograph 1: Typical character of the outlook across Whanganui Inlet from causeway.



Photograph 2: Typical character of the outlook across Whanganui Inlet from a high point on the public road. Causeway visible to right of view.



Photograph 3: Typical character of the outlook across Whanganui Inlet from causeway.



Photograph 4: Typical character of the outlook across Whanganui Inlet from causeway conveying character of highly convoluted and bush clad context.





Photograph 5: Typical character of the outlook across Whanganui Inlet from causeway conveying character of highly convoluted and bush clad context.

Photograph 6: Typical character of the Whanganui Inlet and its context from a high point on the public road.



Photograph 7: Mangarakau Wharf on the Whanganui inlet (source: [https://commons.wikimedia.org/wiki/File:Mangarakau\\_Wharf\\_on\\_the\\_Whanganui\\_inlet\\_-\\_panoramio.jpg](https://commons.wikimedia.org/wiki/File:Mangarakau_Wharf_on_the_Whanganui_inlet_-_panoramio.jpg))



Photograph 8: Old Wharf built on wooden wreck (source: <http://www.cycletour.org.nz/rides/south/golden-bay.html>)



Photograph 10: Typical character of existing wharf.



Photograph 9: Mangarakau Wharf, Westhaven Estuary (Whanganui Inlet), Golden Bay (source: <https://www.flickr.com/photos/flyingkiwigirl/15098763980>)



Photograph 11: Land based development at existing wharf.



Photograph 12: Typical character of wharf and proposed mooring area context.



Photograph 14: Typical character of existing wharf.



Photograph 13: Typical character of wharf and proposed mooring area context.



Photograph 15: View out over proposed mooring area adjacent wharf.



Photograph 16: Zoomed in view out over wharf.

## 4.0 Mooring Area: Milnthorpe (Parapara Estuary)

- 4.1 Parapara Estuary is located on the east side of SH60, just south of Collingwood.
- 4.2 The Parapara Estuary is described in the Davidson Environmental Report as follows:
- Robertson and Stevens (2012) described the Parapara Estuary as “a moderate-sized (195 ha), shallow, well-flushed, seawater dominated, tidal lagoon type estuary with one tidal opening, one main basin and extensive saltmarsh and seagrass beds. A large embayment (22 ha) is cut off from the main body of the estuary by a causeway (State Highway 60). The catchment is mostly undeveloped and dominated by native forest (96%) and exotic forestry (2%). Developed pasture is only 1% of the catchment. Sand spits to the north and south enclose the inlet from the open sea. On the northwest shore a limestone band is exposed and freshwater springs bubble up through the mudflats nearby.”*
- Roberston and Stevens (2012) stated “ecologically, habitat diversity is high with much of its intertidal vegetation intact, extensive shellfish beds, large areas of saltmarsh (21% of estuary), some seagrass (0.6% of estuary), rocky platforms and sand dune. However, the estuary is excessively muddy (25% soft mud), the southern end has been modified, and a causeway and road cuts through the western area. The lagoon area upstream of the causeway is poorly flushed, through inadequate culvert drains, and consequently has excessive sedimentation and degraded habitat. The estuary is recognised as a valuable nursery area for marine and freshwater fish, an extensive shellfish resource, and is very important for birdlife”. Davidson et al. (1993) stated “the tip of the southern sand spit is an important high tide roost for banded dotterel, Caspian tern and variable oystercatcher.”*
- 4.3 The inlet surrounding the (consented) wharf (and including the proposed mooring area) has also been identified in a District wide Natural Character Assessment to rate as having Outstanding Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 4.4 Settlement in the area includes: a relative modest cluster of low lying permanent and holiday homes nestled into vegetation on the northern side of the estuary entrance (Nelson St environs); and the more extensive beachside settlement of Parapara throughout the more elevated spit landform defining the eastern edge of the estuary. The majority of the Parapara holiday homes and permanent dwellings tend to be oriented towards the coast away from inlet, although a cluster towards the north western margins overlook the estuary. The distal end of the spit comprises reserve land.
- 4.5 Milnthorpe Quay is located near the estuary mouth and is described on the TDC website as near derelict. The structure is owned by the Crown and is under the control of the Department of Conservation. An unsealed boat ramp adjacent the quay is popular with recreational boaties.
- 4.6 SH60 traverses the western side of the waterbody and crosses its south western portion (via causeway). Moderately to steeply sloping bush and production pine covered hills enclose the western and south sides of the inlet.
- 4.7 To the north of the Nelson St cluster is Milnthorpe Park, an exotic forest regeneration programme (on Crown land) that is managed by an Incorporated Society under an agreement with DoC. Here, a variety

of hardy but non-native trees have been planted on very poor soils. The aim of the project is to restore the area's natural forest cover faster than would be possible using only native species. The project began in 1974 and now much of the area is covered in tall exotic trees with the shade beneath them enabling native species to establish. Numerous tracks enable public access throughout the park including access to a small finger of land at the far eastern end of Kendal Street. The highly attractive and relatively undeveloped feel of the area makes it highly popular for picnicking etc.

- 4.8 The nearby estuary and coast are popular for swimming although swift currents develop with changes in the tide.
- 4.9 The proposed mooring area is to the west of Milnthorpe Quay and extends over an intertidal area that comprises approximately half of the small embayment in the north western quadrant of the inlet, near the road leading to the Nelson Street cluster. Existing vegetation patterns provide a relatively high degree of enclosure to the embayment.
- 4.10 Three unconsented swings moorings are located within the proposed mooring area. Three consented swing moorings and an unconsented fixed mooring are located outside of the proposed mooring area.
- 4.11 The proposed mooring area seeks to rationalise existing consented and unconsented moorings in one location and enable a limited extent of additional moorings to provide for the local community in a sheltered location.
- 4.12 The proximity of the proposed mooring area to the existing wharf (and road) suggests a contextual fit for the proposed development.
- 4.13 Whilst the mooring area will be visible from at least some of the dwellings in the area (at a range of distances) and from the reserve land opposite, and will be glimpsed from the road and estuary margins of Milnthorpe Park (likely masts only seen in the majority of these views), the presence of vessels moored in the inlet in intertidal areas is a well-established visual element. The limited extent of the proposed mooring area in combination with this established visual context means that the proposed development will not detract from the character and quality of the outlook enjoyed from these locations.
- 4.14 The acceptability of the location in terms of marine ecology effects as outlined in the Davidson Environmental Report in conjunction with the contextual and visual ‘fit’ described above will ensure that adverse natural character effects are avoided.
- 4.15 Importantly, this contextual and visual ‘fit’ means that the proposed mooring area will not detract from the highly attractive and distinctive estuarine ‘sense of place’ associated with the Parapara Estuary and surrounds.
- 4.16 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.



Figure 3: Proposed mooring area (source: TDC).



Figure 4: Proposed mooring area at Milnthorpe (Parapara Estuary) (source: Davidson Environmental Report (April 2015)).



Photograph 17: Entrance to the Parapara Estuary. Distal spit Reserve land to the left of view.



Photograph 18: Nelson Street cluster near the estuary mouth glimpsed from the water behind coastal vegetation.



Photograph 19: View of Milnthorpe Quay from the water looking south westwards.



Photograph 20: Proposed mooring area in centre of view. Milnthorpe Quay to right of view. Dwellings nestled into bush visible around hill slopes.



Photograph 21: Looking north eastward from near the eastern end of the proposed mooring area out to sea. Milnthorpe Quay to left of view.



Photograph 22: Existing Milnthorpe Quay structure.



Photograph 23: Existing moored vessel in proposed mooring area.





Photograph 24: Typical character of proposed mooring area context.



Photograph 26: Reserve near proposed mooring area. Shoreline vegetation serves to screen/filter views in places.



Photograph 25 Typical character of proposed mooring area context.



Photograph 27: Typical character of proposed mooring area context.

## 5.0 Mooring Area: Boundary Bay (ATNP)

- 5.1 Boundary Bay is located on the north western side of the larger embayment within which Rakāuroa (Torrent Bay) is positioned in ATNP. The wider bay presents a range of sheltered anchoring conditions and for this reason is well established as a safe haven for boaties (as suggested by the naming of the southern portion of the Rakāuroa embayment as 'The Anchorage').
- 5.2 Boundary Bay enjoys a south easterly aspect and there are a scattering of holiday homes along the beachfront accessed via the water (only).
- 5.3 The white sand bay is framed by dense regenerating bushclad slopes and dramatic rocky headlands which, inconjunction with the clear waters of the bay, creates a highly attractive and memorable composition. The Abel Tasman walkway does not pass through the bay, however the area is popular for sea kayaking (including landing in the bay) and recreational boating.
- 5.4 The Davidson Environmental Report describes the Boundary Bay (and Glasgow Bay) as follows:
- Davidson (1992) described the Abel Tasman National Park coast (92 km) as combinations of sandy beaches, sandy estuaries and granite rocky coasts. The coast is a high use area and is internationally recognised for its scenic values. Davidson (1992) reported a low biomass of marine algae, a high diversity of reef fish, however, the abundance of edible fish species was low. The author recognised 12 subtidal habitat types and their approximate locations were mapped. Important areas for sea birds were also mapped along the Abel Tasman coast (Davidson 1992).*
- The proposed mooring areas located in Boundary and Glasgow Bays have not been surveyed, however, substrate maps produced by Davidson (1992) cover these areas and provide a general description of substratum. A site located approximately 160 m east of the Boundary Bay mooring area has been used as a biological monitoring site since 1994 (Davidson and Richards 2013).*
- 5.5 As outlined earlier, it is expected that an ONL classification applies to most, if not all, of ATNP. The waters of Boundary Bay (and including the proposed mooring area) have been identified in a Districtwide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 5.6 The proposed mooring area coincides with an 'all tide' area and 9 consented swing moorings.
- 5.7 The proposed mooring area seeks to rationalise existing consented moorings and is intended to provide for the local property owners only.
- 5.8 Whilst the mooring area will be visible from at least some of the dwellings in the area, from the beach itself and from the water, the presence of vessels moored in Boundary Bay's 'all tide' area is a well-established visual element. The very limited extent of the proposed mooring area in combination with this established visual context means that the proposed development will not detract from the character and quality of the outlook enjoyed from these locations.
- 5.9 The acceptability of the location in terms of marine ecology effects as outlined in the Davidson Environmental Report in conjunction with the contextual and visual 'fit' described above will ensure that adverse natural character and landscape effects (including visual effects) are avoided.
- 5.10 Importantly, this contextual and visual 'fit' means that the proposed mooring area will not detract from the highly attractive and memorable 'sense of place' associated with this portion of the ATNP coastline. The very limited extent of the mooring area and its confinement to a part of the bay where such activity is already concentrated will avoid the perception of Boundary Bay being 'hemmed in' by moored vessels.
- 5.11 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.



Figure 5: Proposed mooring area (source: TDC).



Photograph 28: Boundary Bay seen to the right of the view.

## 6.0 Mooring Area: Glasgow Bay (ATNP)

- 6.1 Glasgow Bay is also located on the north western side of the larger embayment within which Rakāuroa (Torrent Bay) is positioned in ATNP and sits between Boundary Bay and Rakāuroa. As explained above, the wider bay presents a range of sheltered anchoring conditions and for this reason is well established as a safe haven for boaties (as suggested by the naming of the southern portion of the Rakāuroa embayment as 'The Anchorage').
- 6.2 Glasgow Bay has a more southerly aspect and there is only one holiday home on the beachfront, set behind coastal plantings, and which is accessed via the water (only). Beachfront dwellings at the southern end of Rakāuroa are expected to have long range views to the bay.
- 6.3 The white sand bay is framed by dense regenerating bushclad slopes and dramatic rocky headlands which, in conjunction with the clear waters of the bay, creates a highly attractive and memorable composition. The Abel Tasman walkway does not pass through the bay, however the area is popular for sea kayaking (including landing in the bay) and recreational boating.
- 6.4 The Davidson Environmental Report describes Glasgow Bay (and Boundary Bay) as follows:
- Davidson (1992) described the Abel Tasman National Park coast (92 km) as combinations of sandy beaches, sandy estuaries and granite rocky coasts. The coast is a high use area and is internationally recognised for its scenic values. Davidson (1992) reported a low biomass of marine algae, a high diversity of reef fish, however, the abundance of edible fish species was low. The author recognised 12 subtidal habitat types and their approximate locations were mapped. Important areas for sea birds were also mapped along the Abel Tasman coast (Davidson 1992).*
- The proposed mooring areas located in Boundary and Glasgow Bays have not been surveyed, however, substrate maps produced by Davidson (1992) cover these areas and provide a general description of substratum. A site located approximately 160 m east of the Boundary Bay mooring area has been used as a biological monitoring site since 1994 (Davidson and Richards 2013).*
- 6.5 As outlined earlier, it is expected that an ONL classification applies to most, if not all, of ATNP. The waters of Glasgow Bay (and including the proposed mooring area) have been identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 6.6 The proposed mooring area coincides with an 'all tide' area and 11 consented and 1 unconsented swing mooring. There are 5 unconsented and 1 consented fixed moorings in the Torrent Bay Estuary (near Glasgow Bay).
- 6.7 The proposed mooring area seeks to rationalise existing consented moorings and is intended to provide for the local property owners only.
- 6.8 The mooring area will be visible at relatively close range from the dwelling in the bay (albeit likely filtered by vegetation) and beachfront dwellings at the southern end of Rakāuroa, from the beach itself and from the water. In relation to the dwellings, intervening vegetation or the diminishing effects of distance are expected to contribute an appreciable moderating influence.
- 6.9 In relation to the open views available from the water and beach, the presence of vessels moored in the bay's 'all tide' area is a well-established visual element. The limited extent of the proposed mooring area in combination with this established visual context means that the proposed development will not detract from the character and quality of the outlook enjoyed from these locations.
- 6.10 The acceptability of the location in terms of marine ecology effects as outlined in the Davidson Environmental Report in conjunction with the contextual and visual 'fit' described above will ensure that adverse natural character and landscape effects (including visual effects) are avoided.
- 6.11 Importantly, this contextual and visual 'fit' means that the proposed mooring area will not detract from the highly attractive and memorable 'sense of place' associated with this portion of the ATNP coastline. The very limited extent of the mooring area and its confinement to a part of the bay where such activity is already concentrated will avoid the perception of Glasgow Bay being 'hemmed in' by moored vessels.
- 6.12 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.



Figure 6: Proposed mooring area (source:TDC).



Photograph 29 Typical character of coastline in and around Glasgow Bay.



Photograph 30: Typical character of coastline in and around Glasgow Bay.



Photograph 31: Typical character of northern end of Rakāuroa/Torrent Bay, near Glasgow Bay.



Photograph 32: Typical character of southern end of Rakāuroa/Torrent Bay, near Glasgow Bay.



## 7.0 Mooring Area: Otuwhero Inlet, Marahau (ATNP)

- 7.1 Marahau is located within the wider embayment known as Sandy Bay, some 19 km north of Motueka, and coincides with the start of the Abel Tasman walkway and comprises a small coastal settlement accessed by road. The settlement comprises a mix of permanent and holiday homes, with numerous commercial tourism operators based in the bay. The proposed mooring area is within the Otuwhero Inlet at the southern end of the bay, behind a spit landform.
- 7.2 The Davidson Environmental Report describes Marahau as follows:
- Robertson and Stevens (2012) described Otuwhero Inlet as “a moderate-sized (95 ha), shallow, well-flushed, seawater-dominated, tidal lagoon type estuary with one tidal opening, one main basin, a small tidal arm and a large freshwater influenced saltmarsh separated by a causeway. It has a double sand pit (700 m long) largely vegetated in exotic weeds. Much of the estuary catchment is forest (primarily exotic 46%), with intensive pastoral use at 10%. The granite catchment is highly erodible and land disturbance has led to excessive sediment inputs to the estuary.”*
- With respect to ecological values Roberston and Stevens (2012) stated “habitat diversity is high and includes a community sequence including un-vegetated tidal flats, saltmarsh, seagrass (on the delta area at the mouth), herb-fields, freshwater wetland, and two forest remnants. However, significant areas of saltmarsh and natural vegetated margin have been lost. Currently, saltmarsh occupies 36% of the estuary whereas historically it was approximately 40-50% and much of the terrestrial margin is covered in pines or scrub. In addition, the estuary is excessively muddy (10% soft mud). The inlet is recognised as a valuable nursery area for marine and freshwater fish, an extensive shellfish resource, and is very important for birdlife.” Status species including banded rail, fern-bird, marsh crake, and bittern are present (Walker, 1987).*
- 7.3 Several dwellings are scattered on the regenerating bush clad headland at the southern end of Marahau and are expected to enjoy views out over the Otuwhero Inlet. The inlet area is also seen from Sandy Bay-Marahau Road and Kaiteriteri-Sandy Bay Road and the low lying dwellings at the south end of Marahau settlement near the spit.
- 7.4 As a gateway to ATNP, Marahau is popular for recreational boating, sea kayaking, walking and swimming. The location of several water based commercial tourism operators at Marahau adds a level of concentrated activity in the bay that is greater than that apparent in the national park bays further to the north.
- 7.5 As outlined earlier, it is expected that an ONL classification applies to most, if not all, of ATNP. The waters at Marahau (and including the proposed mooring area) have been identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 7.6 The proposed mooring area coincides with an intertidal area and 12 unconsented swing moorings. Another 9 unconsented swing moorings and 2 unconsented fixed moorings are located outside of the proposed mooring area on both sides of the spit (i.e. seaward side and inlet side).
- 7.7 The proposed mooring area seeks to regularise the patterning of existing moorings and provide a larger overall mooring area in response to mooring demand in the area.
- 7.8 A detailed assessment of the effects of the proposed mooring area on shorebirds has undertaken in the Melville Report. That report concludes that proposed mooring area will have no significant adverse effects on shorebirds.
- 7.9 The location of the mooring area ‘behind’ (or landward of) the sand spit serves to minimise its visual, natural character and landscape ‘influence’ on the wider Sandy Bay embayment.
- 7.10 The mooring area will be visible at relatively close range from the waters of the inlet, the roads and dwellings edging the inlet and at longer range from the dwellings on the headland to the south. The presence of vessels moored in the Otuwhero Inlet tidal area is a well-established visual element and makes an appreciable contribution to the visual character, quality and identity or ‘sense of place’ associated with Marahau.
- 7.11 Further, in each of these views, the existing development at Marahau or pine/grazing land backdrop around the inlet is visible (at least in part) and forms a relatively modified context to the inlet. This established visual context means that the proposed development will not detract from the character and quality of the outlook enjoyed from these locations.
- 7.12 The acceptability of the location in terms of marine ecology effects (as per the Davidson Environmental Report) and shorebirds (the Melville Report), in conjunction with the contextual and visual ‘fit’ described above will ensure that adverse natural character effects are avoided.
- 7.13 Importantly, this contextual and visual ‘fit’ means that the proposed mooring area will not detract from the ‘sense of place’ associated with the Otuwhero Inlet and wider landscape setting.
- 7.14 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.



Figure 7: Proposed mooring area (source:TDC).



Photograph 33: Typical character of proposed mooring area at low tide. Source: [Yachts, Marahau, Tasman Bay, New Zealand](#)



Photograph 34: Typical character of proposed mooring area at low tide. Source: [Excursionistas2: NZed - The Beginning](#)



Photograph 35: Typical character of proposed mooring area at low tide.



Photograph 36: Typical character of proposed mooring area at low tide.



Photograph 37: Houses overlooking inlet visible on bush clad hillside and ridgeline.



Photograph 38: Typical character of existing mooring area adjacent the spit at low tide.



Photograph 39: Road running around the edges of Otuwhero Inlet.



Photograph 40: Landward end of spit, open sea to left of view.



Photograph 41: Spit landform.



Photograph 43: View north eastwards across to the proposed mooring area. (NB poles correspond to launching area/boat ramp on spit.)



Photograph 42: Typical character of existing moorings and their relationship to the spit at low tide.



Figure 8: Proposed mooring area at Otuwhero Inlet (Marahau) –Source: Davidson Environmental Report (April 2015)



Photograph 44: Panoramic view of Marahau from the water. Proposed mooring area behind spit landform in centre of view. Dwellings on bush clad headland at the south end of the bay seen to the left of view.



Photograph 45: Mid-range view to the spit at the southern end of Marahau from the water.



Photograph 46: Longer range view to the spit and beachfront settlement at Marahau from the water.

## 8.0 Mooring Area: Kaiteriteri

- 8.1 Kaiteriteri is a seaside holiday 'resort' settlement some 7.5km from Marahau, the southern (and therefore main) gateway to ATNP.
- 8.2 The highly attractive white sandy beach and clear waters of the bay, framed by bush clad headlands and a series of sculptural rocky outcrops, together with the range of facilities (shops, restaurants and the like) make the area highly sought after as a location for both permanent/holiday homes and camping.
- 8.3 The proximity of the bay to ATNP, its easy accessibility from Motueka and the range of facilities on offer (including campgrounds, tourist accommodation etc) makes it a key location for commercial operators providing access to the park. The relatively deep waters at Kaiteriteri make it suited to anchoring/mooring larger commercial vessels and it is understood that during the peak season summer months, the current mooring space is under pressure. It is understood that during the summer months, commercial operators prefer to be based in Kaiteriteri due the distance of the commercial marina at Motueka from ATNP, the difficulties with getting around the bar at Motueka and the exposure of the Stephens Bay mooring area.
- 8.4 The bay is enclosed by Kākā Island to the north and Torlesse Rock to the south and is effectively divided into two sub-bays via a small bush clad promontory roughly in the centre. A shallow spit defines the northern portion of the bay, behind which is an estuary and coastal flat. Built development is evident throughout the hill backdrop however is, in the main, seen against a dense bush clad backdrop or presents as development nestled into a vegetated setting (for the most part).
- 8.5 Beachfront and hillside development throughout the southern sub-bay appears as more intensive as a consequence of the considerably reduced vegetated context and, in some places, the scale of dwellings.
- 8.6 The bay is highly popular for swimming, kayaking and recreational boating and in many respects is regarded as a key boating gateway to the national park.
- 8.7 It is also understood that the beachfront and waters of the bay are under considerable pressure by competing users during the peak summer months and a range of management strategies have been introduced to allow for safe enjoyment by the wide range of users (commercial operators, water skiers, swimmers, jet skiers, boat launching, mooring etc).
- 8.8 The Davidson Environmental Report describes Kaiteriteri as follows:  
*Kaiteriteri is composed of the same range of substrata known from the greater Abel Tasman coast (i.e. combinations of sandy beaches, sandy estuaries, and granite rocky coasts) (Davidson 1992). Kaiteriteri is a very high use area with motor camps, shop, restaurants, cafes and adventure operators. Considerable human modification of the bay and estuary has occurred including reclamation, roading and subdivision. The marine biology of the area has, however, had little study. Davidson and Chadderton (1994) established a rocky sample site on a reef near little Kaiteriteri. The authors reported a low biomass of marine algae and high numbers of invertebrate grazers. The authors stated the rocky site was comparable to the granite substrata along the National Park coast.*
- 8.9 The northern portion of beachfront, the northern headland and Kākā Island are zoned Open Space although no walking tracks are shown in this area. The majority of this area together with the estuary and undeveloped hill backdrop behind the southern end of the bay (Kaiteriteri Mountain Bike Park) forms the Kaiteriteri Recreation Reserve. The exceptions are Kākā Island which is excluded from the recreation reserve, and the norther headland which coincides with the Kaka Point Historic Reserve.
- 8.10 The waters at Kaiteriteri (and including the proposed mooring area) have been identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 8.11 Two new (predominantly) 'all tide' mooring areas are proposed throughout the northern portion of the bay, adjacent the headland terminating in Kākā Island. The 'outer' mooring area is intended for use by commercial operators (as the water depth makes it suited to larger vessels) with the 'inner' mooring area intended for seasonal use 'private' boats (noting that at least part of this area is tidal). The latter effectively corresponds to the 'footprint' of the majority of existing moorings in the bay, so the proposal will see an expansion of mooring activity seaward, away from the beachfront.
- 8.12 Some 20 consented swing moorings are located within the proposed mooring areas. 3 unconsented moorings are located outside the proposed areas
- 8.13 The proposed mooring areas seek to rationalise existing moorings, better provide for commercial operator moorings and include a limited extent of additional smaller boat moorings in a seasonal mooring area.
- 8.14 The presence of existing (consented and unconsented) moorings in the proposed development area together with the identity of the area as a key boating gateway to ATNP suggests a contextual and visual 'fit'.
- 8.15 The location of the proposed mooring areas tucked in against the northern headland serves to minimise its visual, natural character and landscape 'influence' on the wider Kaiteriteri embayment. The approach of focussing 'new' moorings seaward of the existing concentration of vessels is also sympathetic to the intentions of maintaining a relatively open and uncluttered beachfront, which is considered to be beneficial to the general amenity of the beachfront.
- 8.16 The mooring area will be visible at relatively close range from the water, the beachfront and dwellings around the bay.
- 8.17 The presence of numerous vessels moored and anchored (albeit typically for a relatively short duration due to the exposed nature of the bay) at Kaiteriteri is a well-established visual element during the summer months and makes an appreciable contribution to the visual character, quality and identity or 'sense of place' associated with the bay. It should be noted that during the winter months, the majority of these vessels are not present in the bay.
- 8.18 Further, in each of these views, there is a keen awareness of the extensive built development at Kaiteriteri which forms a highly modified context for the proposed development.
- 8.19 This established visual context means that the proposed development will not detract from the character and quality of the outlook enjoyed from these locations.

- 8.20 That said, it is fair to say that the new mooring areas are located in a portion of the bay that is perceived as less developed, largely as a consequence of the vegetation cover throughout the hills and headland framing the northern sub-bay. The concentration of existing mooring activity in this part of the bay plays an important moderating role in this regard as described above. Further, it is understood that the location of the proposed moorings has been carefully considered to balance the need for sheltered (and in the case of the commercial vessels, adequately depth) waters and enabling the other 'water users' in the bay (eg water skiing etc).
- 8.21 It is also understood that preliminary feedback from iwi is supportive of the proposed mooring area at Kaiteriteri.

- 8.22 The acceptability of the location in terms of marine ecology effects as outlined in the Davidson Environmental Report in conjunction with the contextual and visual 'fit' described above will ensure that adverse natural character effects are avoided.
- 8.23 Importantly, this contextual and visual 'fit' means that the proposed mooring area will not detract from the 'sense of place' associated with Kaiteriteri. The relatively limited extent of the mooring area and its confinement to a part of the bay where such activity is already concentrated will avoid the perception of Kaiteriteri being 'hemmed in' by moored vessels.
- 8.24 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.





Figure9: Proposed mooring area (source:TDC).



Photograph 47: Typical character of holiday makers using beach.



Photograph 48: Typical character of holiday makers using beach.



Photograph 49: Typical character of holiday makers using beach.



Photograph 51: Typical character of holiday makers using the waters of the bay.



Photograph 50: Anchored and moored vessels in proposed mooring area.



Photograph 52: Commercial operators: sea kayaking.



Photograph 53: Typical character of commercial vessels that moor in the bay.



Photograph 54: Typical character of commercial vessels that moor in the bay (noting that the buoys mark the extent of the seasonal mooring area).



Photograph 55: Panoramic view of Kaiteriteri. The seemingly more intensively developed southern sub-bay is seen to the left of view.



Photograph 56: Northern portion of Kaiteriteri where the new mooring areas are proposed. Bush clad headland framing the northern side of the bay seen to the right of view.

## 9.0 Mooring Area: Stephens Bay

- 9.1 Stephens Bay is located to the south of Kaiteriteri and comprises a small coastal settlement with holiday and permanent homes scattered along the beachfront and throughout the hill slopes framing the bay.
- 9.2 Bush clad hill slopes backdrop the southern end of the bay in mid to longer range views from the water.
- 9.3 Ridgeline dwellings are visible in mid-range views from the water to the northern end of the bay and a subdivision throughout the backdrop in this part of the bay would appear to be under construction.
- 9.4 The Davidson Environmental Report describes the area as follows:
- Stephens Bay is composed of the same range of substrata known from the greater Abel Tasman coast (i.e. combinations of sandy beaches, sandy estuarine flats, and granite rocky coasts (Davidson 1992). Stephens Bay has a small car park and is dominated by residential development. Considerable human modification of the catchment has occurred including land clearance, roading and subdivision. The marine biology of the area has, however, had little study. Based on other work along the Abel Tasman coast (Davidson 1992, Davidson and Chadderton 1994, Davidson and Freeman 2013, Davidson and Richards 2014) it is expected that subtidal rocky and soft shore habitats will be comparable to the greater Able Tasman coast and National Park. The existing and proposed mooring areas located in Stephens Bay have not been biologically surveyed.*
- 9.5 An Esplanade Reserve extends along the beach front, adjoining Tapu Reserve at its western end and the Stephens Bay Recreation Reserve at its north end.
- 9.6 The waters at Stephens Bay (and including the existing and proposed mooring area) have been identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 9.7 An existing mooring area is established throughout the northern portion of the bay in which there are 8 consented swing moorings. It is proposed to extend the existing 'all tide' mooring area seawards to 'capture' two consented moorings and to provide for a limited number of additional 'all tide' moorings.
- 9.8 The (proposed) mooring area will be visible at relatively close range from the water, the beachfront and dwellings around the bay, public roads and the reserve network (including elevated land) framing the bay.
- 9.9 The presence of vessels moored in the bay's 'all tide' area is a well-established visual element. The relatively limited extent of the change to the mooring 'footprint' envisaged by the proposed mooring area, in combination with this established visual context means that the proposed development will not detract from the character and quality of the outlook enjoyed from these locations.
- 9.10 Further, in each of these views, there is a keen awareness of the built development at Stephens Bay which forms a modified context for the proposed development.
- 9.11 The location of the proposed mooring area in a portion of the bay that is currently favoured for such uses is sympathetic to the intentions of minimising adverse visual, natural character and landscape effects. In addition the proposed configuration of the 'new' mooring area seawards of the existing mooring area will minimise the influence of the development and activity on the beachfront itself.
- 9.12 The acceptability of the location in terms of marine ecology effects as outlined in the Davidson Environmental Report in conjunction with the contextual and visual 'fit' described above will ensure that adverse natural character effects are avoided.
- 9.13 Importantly, this contextual and visual 'fit' means that the proposed mooring area will not detract from the 'sense of place' associated with Stephens Bay. The relatively limited extent of the mooring area and its confinement to a part of the bay where such activity is already concentrated will avoid the perception of Stephens Bay being 'hemmed in' by moored vessels.
- 9.14 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.



Figure 10: Proposed mooring area (source: TDC).



Photograph 57: Typical character of proposed mooring area.



Photograph 58: Typical character of Stephens Bay beachfront.



Photograph 59: Typical character of proposed mooring area.



Photograph 60: Closer range view of the proposed mooring area at Stephens Bay.



Photograph 61: Longer range view to Stephens Bay. Proposed mooring area to right of view.



Photograph 62: Stephens Bay Esplanade Reserve, Kaiteriteri  
(source: Tasman District Council <http://www.tasman.govt.nz>)



## 10.0 Mooring Area: Tapu Bay

- 10.1 Tapu Bay is located immediately to the south of Stephens Bay and sits at the northernmost end of the broader 'embayment' extending from Anarewa Point to Outer Island, just south of the Riwaka River mouth.
- 10.2 A small coastal settlement (that is contiguous with the adjacent settlement at Stephens Bay), straddles the ridgeline and slopes, extending down to the beachfront at the northern end of the bay.
- 10.3 An Esplanade Reserve adjoins the beachfront and the dunes in the area are the subject of a local community restoration project. The reserve extends along the beach front, adjoining Tapu Reserve at its western end and the Stephens Bay Recreation Reserve at its north end.
- 10.4 The Davidson Environmental Report describes the area as follows:
- Robertson and Stevens (2012) included this area into a larger unit encompassing the Motueka Estuary delta. The authors described the coastal intertidal flats as "consisting of a short, narrow and shallow tidal river mouth estuary that discharges onto a broad delta (~700 ha), with associated tidal lagoon estuaries located to the north (Riwaka 15 ha) and south (Motueka 76 ha). The river mouth estuary and delta has a high freshwater inflow and, as a consequence, is not very susceptible to having water and sediment quality problems. A series of islands and spits occupy the delta area and includes discharges from other smaller streams and rivers (e.g. Riwaka River). At low tide, most of the estuary/delta consists of exposed sandy or cobble tidal flats. Much of the Motueka catchment is forest, with pastoral use at 16%. The majority of the sediment and nutrient load from the river is discharged and settles into the subtidal plume area in Tasman Bay (Tuckey et al. 2006)."*
- With respect to ecological values Roberston and Stevens (2012) stated "Ecologically, habitat diversity is moderate with much of its intertidal vegetation intact, and moderate areas of saltmarsh (4.3% of estuary) and herbfield (3.5%) (Tuckey et al. 2004). However, the natural vegetated margin of the greater Motueka delta flats has been lost and is now developed for grazing. Also, since 1947 at least 33ha of saltmarsh has been drained and converted to pasture. Evidence also indicates a further loss of 200-300 ha prior to 1947 (Tuckey et al. 2004). The estuary/delta is recognised as a valuable nursery area for marine and freshwater fish, is rich in shellfish, and a major feeding ground for wading birds."*
- 10.5 The waters at Tapu Bay (and including the proposed mooring area) have been identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 10.6 The proposed mooring area coincides with the tidal flats north east of the Riwaka channel and 7 unconsented swing moorings. Another 8 unconsented moorings are located outside of the proposed mooring area. The proposed mooring area seeks to rationalise existing moorings, and provide for limited local use. Overall there is a proposed reduction in the extent of moorings in the area.
- 10.7 The mooring area will be visible at relatively close range from the water and from at least some locations on the beachfront/reserve, Riwaka-Kaiteriteri Road and dwellings around the bay.
- 10.8 The presence of vessels moored in the bay's intertidal area is a well-established visual element. The reduced extent of the perceived existing mooring 'footprint' anticipated by the proposed mooring area, in combination with this established visual context means that the proposed development will not detract from the character and quality of the outlook enjoyed from these locations.
- 10.9 Further, in each of these views, there is a keen awareness of the built development at Tapu Bay which forms a modified context for the proposed development.
- 10.10 The location of the proposed mooring areas in a portion of the bay that is currently favoured for such uses is sympathetic to the intentions of minimising adverse visual, natural character and landscape effects.
- 10.11 The acceptability of the location in terms of marine ecology effects as outlined in the Davidson Environmental Report in conjunction with the contextual and visual 'fit' described above will ensure that adverse natural character effects are avoided. In particular the proposed mooring area has been carefully configured to avoid existing eelgrass areas.
- 10.12 Importantly, this contextual and visual 'fit' means that the proposed mooring area will not detract from the 'sense of place' associated with Tapu Bay. The relatively limited extent of the mooring area and its confinement to a part of the bay where such activity is already concentrated will avoid the perception of Tapu Bay being 'hemmed in' by moored vessels.
- 10.13 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.

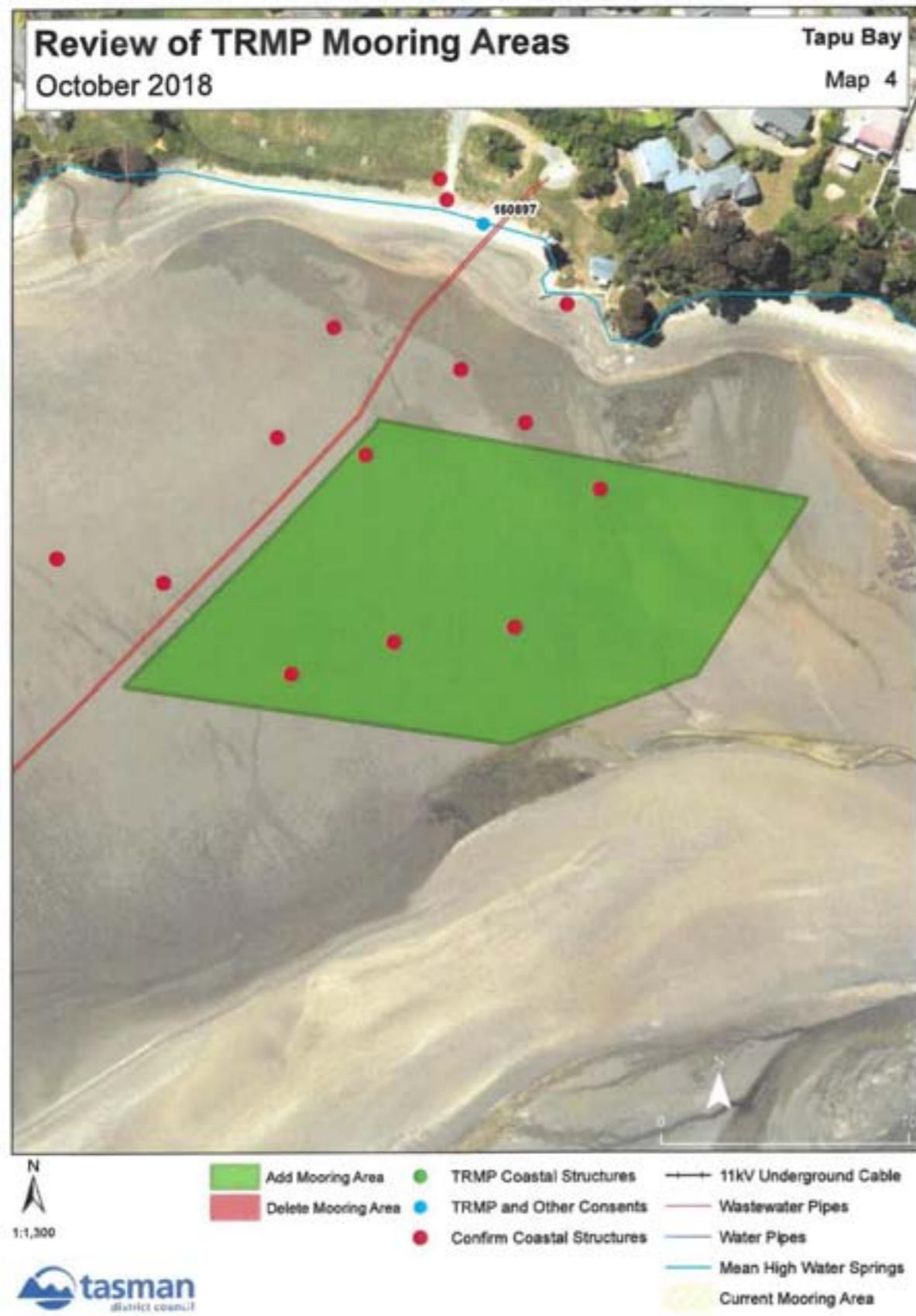


Figure 11: Proposed mooring area (source: TDC).



Figure 12: Proposed mooring area at Tapu Bay – Source: Davidson Environmental Report (April 2015).



Photograph 63: Tapu Bay, Kaiteriteri (source: <https://www.holidayhouses.co.nz/new/listing/68460>)



Photograph 65: Typical character of Tapu Bay.



Photograph 64: Typical character of proposed mooring area at low tide.



Photograph 66: Tapu Bay, Kaiteriteri (source: AA Traveller <https://www.aa.co.nz>)

## 11.0 Mooring Area: Moutere Inlet: Sand Spit Delta

- 11.1 The Moutere Inlet sand spit delta is located to the south of Motueka, a seaside town on the western side of Tasman Bay, approximately 50km from Nelson. The delta is formed of sediments from the Motueka and Riwaka Rivers, swept into continually changing shapes by the sea. A highly mobile sand spit frames the eastern side of the delta, with Motueka Quay and Port Motueka enclosing the western side.
- 11.2 The DoC website describes the spit as an internationally recognised site for local and migrant shorebirds (under the Ramsar convention for wetlands). Walking track access is available throughout the spit, affording highly attractive views from D’Urville Island to Richmond, the Arthur Ranges and ATNP.
- 11.3 The western side of the delta effectively comprises a ‘second’ spit landform that encloses the northern end of the Moutere Inlet (to the east). A range of permanent and (to a lesser extent) holiday homes line the delta frontage (Trewavas Street), terminating in the extensive commercial/industrial development associated with Port Motueka.
- 11.4 Jackett Island lies a short distance across the Motueka River mouth immediately to the south of Port Motueka. Scattered holiday homes and permanent dwellings are located on the island, generally oriented to afford attractive views out over the inlet waters to the west, or delta (and Tasman Bay) waters to the east. Exotic plantings generally serve to limit views to the north (to the proposed mooring area).
- 11.5 The Davidson Environmental Report describes the area as follows:  
*Robertson and Stevens (2012) described this area as part of the Moutere Inlet and adjacent delta. The authors described the intertidal flats in the Moutere delta as “an extensive coastal tidal flat delta (243ha) located inshore of the Motueka sandspit. Much of the sheltered tidal flat area inside the spit consists of soft mud, backed by the highly modified Motueka beachfront (seawalls, roads and houses).” The spit and associated delta supports extensive beds of cockles, pipi, and tuatua being major feeding grounds for wading birds (Walker 1987).*
- 11.6 The waters at Moutere Inlet (and including the proposed mooring area) have been identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 11.7 The proposed mooring area coincides with the tidal flats approximately mid-way along (and to the east of) the stable and ‘developed’ spit landform that terminates at Port Motueka. The new mooring area coincides with 17 unconsented swing moorings with a further 13 unconsented swing moorings located outside of the proposed mooring area. The proposed mooring area seeks to rationalise existing moorings, and provide for a limited level of local use. Overall there is a reduction in the number of moorings in the area.
- 11.8 A detailed assessment of the effects of the proposed mooring area on shorebirds is addressed in the Melville Report. That report concludes that proposed mooring area will have no significant adverse effects on shorebirds.
- 11.9 The mooring area will be visible at relatively close range from the water, parts of the shoreline and quayfront (to the north), some of the dwellings along the eastern side of Trewavas Street, the port and parts of the Doc Reserve on the sand spit running along the east side of the delta.
- 11.10 The presence of vessels moored in the delta’s intertidal area is a well-established visual element. The reduced extent of the perceived existing mooring ‘footprint’ anticipated by the proposed mooring area, in combination with this established visual context means that the proposed development will not detract from the character and quality of the outlook enjoyed from these locations.
- 11.11 Further, in each of these views, there is a keen awareness of the built development associated with Motueka and the Port, which forms a highly modified context for the proposed development.
- 11.12 The location of the proposed mooring area in a portion of the delta that is currently favoured for such uses is sympathetic to the intentions of minimising adverse visual, natural character and landscape effects. The proximity of the mooring areas to the marina and port, also suggests a contextual fit.
- 11.13 The acceptability of the location in terms of marine ecology effects (as per the Davidson Environmental Report) and shorebirds (as per the Melville Report), in conjunction with the contextual and visual ‘fit’ described above will ensure that adverse natural character effects are avoided.
- 11.14 Importantly, this contextual and visual ‘fit’ means that the proposed mooring area will not detract from the ‘sense of place’ associated with the Moutere Inlet sand spit delta. The relatively limited extent of the mooring area and its confinement to a part of the delta where such activity is already concentrated will avoid the perception of the sandspit being ‘hemmed in’ by moored vessels.
- 11.15 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.



Figure 13: Proposed mooring area (source: TDC).



Figure 14: Proposed mooring area at Moutere Inlet Sand Spit Delta (to the right of image). Source: Davidson Environmental Report (April 2015)



Photograph 67: Typical character of proposed mooring area at mid tide.



Photograph 68: Typical character of proposed mooring area.



Photograph 70: Typical character of proposed mooring area.



Photograph 69: Typical character of shoreline adjacent proposed mooring area.



Photograph 71: Typical character of proposed mooring area at low tide.



Photograph 72: View from Motueka River mouth entrance northwards to proposed mooring area. Port Motueka to left of view. Development along Trevawas Street glimpsed behind vegetated context.



Photograph 73: Northern end of Jackett Island (groyne visible in foreground). Port Motueka to the right (outside of field of view).



Photograph 74: Looking southwards from the Motueka River mouth entrance. Southern end of DoC sandspit reserve area seen to left of view.





Photograph 75: Typical character of Port Motueka.

## 12.0 Mooring Area: Moutere Inlet: Marina

- 12.1 The proposed mooring area in relation to the Moutere Inlet: Marina is located within the northern portion of the Moutere Inlet and to the west of the existing marina and Port Motueka. There is a large existing inter tidal mooring area in this part of the inlet, and it is intended to substantially reduce the existing area so that it is confined to a more limited extent of the intertidal flats on the eastern side of the inlet (near the marina and port).
- 12.2 The causeway associated with Wharf Road crosses the inlet to the north of the proposed mooring area and The Coastal Highway runs along the western shoreline of the inlet. Beyond this highway (i.e. to the west) are a range of horticultural properties.
- 12.3 The Davidson Environmental Report describes the area as follows:  
*Robertson and Stevens (2012) described Moutere Inlet as “a moderate-sized (762 ha), shallow, well-flushed, seawater-dominated, tidal lagoon type estuary with two tidal openings, one main basin, several tidal arms separated by causeways.” Further they stated “ecologically, habitat diversity is moderate but significant areas of high value habitat have been lost. Currently, saltmarsh occupies 8% of the estuary and seagrass 0.1%. Prior to 1947, saltmarsh was double the current area (Clark and Gillespie 2006). In addition, the estuary is excessively muddy (22% is soft mud), particularly the sheltered delta basin, and the natural vegetated margin has been lost and is now developed for grazing and horticulture (Clark et al. 2006). The inlet is recognised as a valuable nursery area for marine and freshwater fish, an extensive shellfish resource, and is important for birdlife. Toxicant indicators (heavy metals) are low (Gillespie and Clark 2006).”*
- 12.4 The waters at Moutere Inlet (and including the proposed mooring area) have been identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 12.5 The new (reduced) mooring area coincides with approximately 24 unconsented swing moorings and 2 consented moorings. As explained above, the proposed mooring area seeks to rationalise existing moorings, reflect current use patterns and remove undeveloped and unwanted parts of the existing mooring area from the estuary in the interests of enhancing the natural character of the area.
- 12.6 The mooring area will be visible at relatively close range from the water, the shoreline (including public roads), the marina and port, and horticultural properties.
- 12.7 The presence of vessels moored in this portion of the Moutere Inlet intertidal area is a well-established visual element. The reduction in the extent of the mooring area, in combination with this established visual context means that the proposed development will not detract from the character and quality of the outlook enjoyed from these locations.
- 12.8 Further, in each of these views, there is a keen awareness of the built development associated with Motueka and the Port, which forms a highly modified context for the proposed development.
- 12.9 The location of the proposed mooring area in a portion of the inlet that is currently favoured for such uses is sympathetic to the intentions of minimising adverse visual, natural character and landscape effects. The proximity of the mooring areas to the marina and port, also suggests a contextual fit.
- 12.10 The acceptability of the location in terms of marine ecology effects as outlined in the Davidson Environmental Report in conjunction with the contextual and visual ‘fit’ described above will ensure that adverse natural character effects are avoided.
- 12.11 Importantly, this contextual and visual ‘fit’ means that the proposed mooring area will not detract from the ‘sense of place’ associated with the Moutere Inlet Marina area. The relatively limited extent of the mooring area and its confinement to a part of the inlet where such activity is already concentrated will avoid the perception of the inlet margins being ‘hemmed in’ by moored vessels.
- 12.12 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.

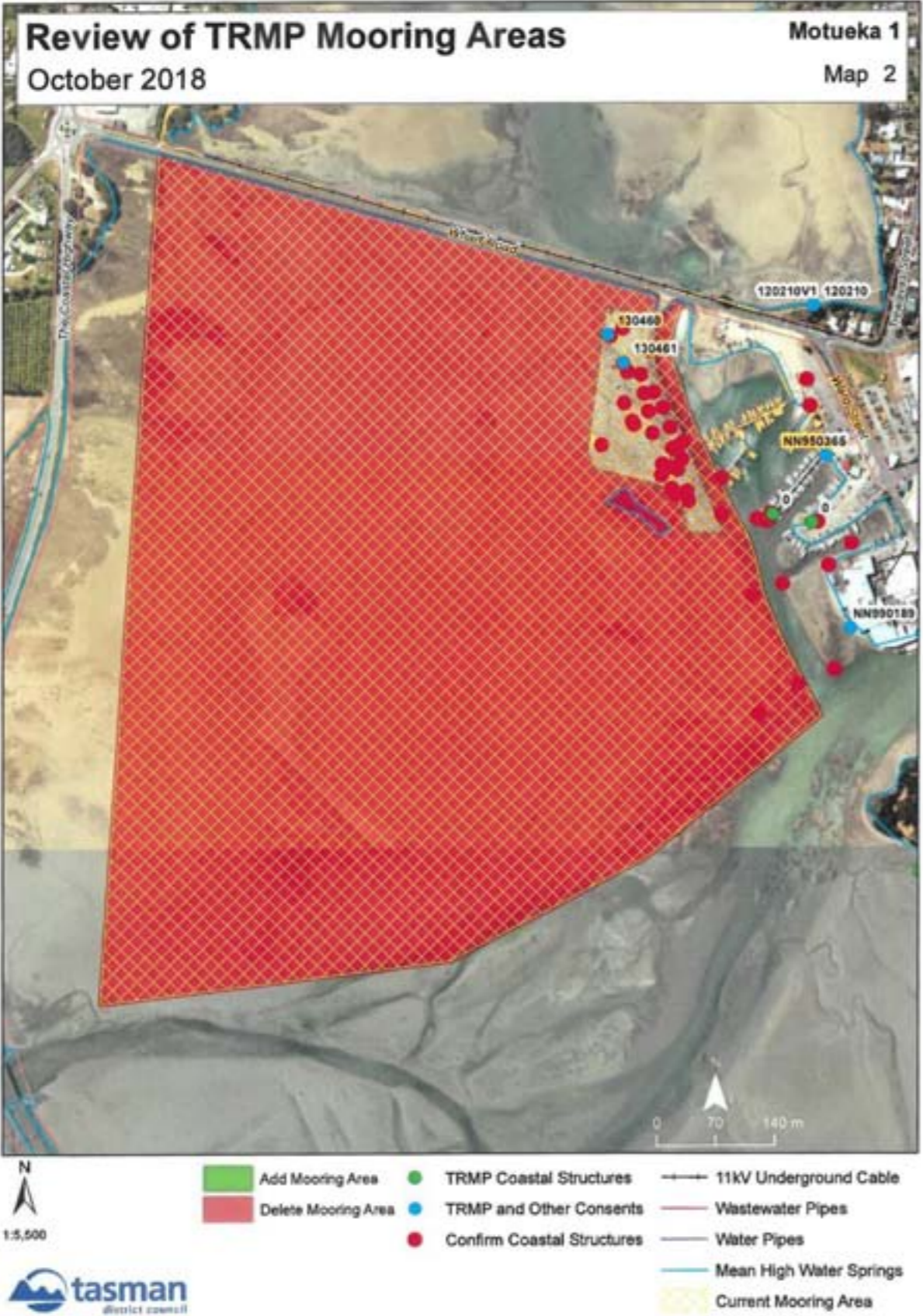


Figure 15: Proposed mooring area (source: TDC).



Figure 16: Proposed mooring area at Moutere Inlet Marina (to the left of image). Source: Davidson Environmental Report (April 2015)



Photograph 76: Typical character of proposed mooring area.



Photograph 77: Typical character of proposed mooring area. Marina visible to left of view.



Photograph 79: Typical character the marina.



Photograph 78: Typical character of proposed mooring area.



Photograph 80: Typical character of proposed mooring area as seen from the marina.



Photograph 81: Typical character of the marina.



Photograph 82: View north westwards across the proposed mooring area from the marina.



Photograph 83: View northwards from the Motueka River channel to the proposed mooring area.

## 13.0 Mooring Area: Mapua

- 13.1 Mapua is located approximately 30 km from Nelson and comprises a small-scale and low key coastal settlement adjacent the Waimea Inlet.
- 13.2 A finger of land extends southwards from the settlement 'proper' into the Waimea Inlet, terminating at Grossi Point. A wharf and thriving commercial area (craft brewery, restaurants, cafes etc) are located on this small 'peninsula'.
- 13.3 Over recent years, the settlement and wider Ruby Bay coastline have become popular as a holidaying destination with a range of restaurants, shops, art galleries etc. The Tasman Great Trail cycle route (Nelson to Motueka) passes through the area and the highly attractive views of the wharf and moored/anchored vessels in the inlet is a popular vista used in tourism promotional material.
- 13.4 The Mapua ferry runs from the Mapua wharf to Moturoa/Rabbit Island to the south.
- 13.5 The Davidson Environmental Report describes the area as follows:
- Robertson and Stevens (2012) described Waimea Inlet as "a large (3,345 ha), shallow, well-flushed, seawater-dominated, tidal lagoon type estuary with two tidal openings, two main basins, and several tidal arms. Catchment land use is mixed with forest occupying 69% and prime pastoral 20%." The authors stated "ecologically, habitat diversity is high with much of its intertidal vegetation intact, moderate areas of saltmarsh (10% of estuary), some seagrass (1% of the estuary, located predominantly in the eastern basin near Saxton Island) and a small subtidal sponge-dominated community (by Rough Island). However, a large proportion of the estuary is soft muds (55%) and most of the natural vegetated margin has been lost and is now developed. Also, since 1946 at least 83 ha of saltmarsh has been reclaimed and developed. The invasive weed, Spartina anglica, occupied large areas of the estuary in the 1980's (40-50 ha in 1985) after it was introduced to promote reclamation and stabilisation of soft muds entering from the catchment. In the early 1990's, it was eradicated. Despite the muddy nature of the estuary sediments, the inlet is recognised as a valuable for birdlife, nursery area for marine and freshwater fish, and shellfish.*
- 13.6 A sizeable mooring area extends around the southern and eastern sides of the Gross Point 'peninsula' throughout intertidal and 'all tide' areas (i.e. parts of the Mapua Channel). The proposed mooring area comprises similarly scaled mooring area and sees the activity reconfigured to two areas: one on the west side of Grossi Point; and another on the east side of Grossi Point, around the wharf. The majority of the proposed mooring areas coincide with 'all tide' portions of the CMA.
- 13.7 Approximately 28 consented swing moorings and 5 unconsented swing moorings coincide with the proposed mooring area. The intention of the proposed development is to rationalise the patterning of existing swing moorings, favouring 'all tide' rather than intertidal areas.
- 13.8 The mooring area will be visible at relatively close range from the water, the shoreline including public roads, dwellings and commercial properties on the Grossi Point 'peninsula', the shoreline of Moturoa/Rabbit Island and the Mapua Wharf.
- 13.9 The presence of vessels moored in this portion of the Waimea Inlet/Mapua channel and intertidal area is a well-established visual element. The reduction in the extent of the mooring area, in combination with this established visual context means that the proposed development will not detract from the character and quality of the outlook enjoyed from these locations.
- 13.10 Further, in each of these views, there is an awareness of the built development associated with Mapua, which forms a modified context for the proposed development.
- 13.11 The location of the proposed mooring area in a portion of the Waimea Inlet and Mapua Channel that is currently favoured for such uses is sympathetic to the intentions of minimising adverse visual, natural character and landscape effects. The proximity of the mooring areas to the operating wharf, also suggests a contextual fit.
- 13.12 The acceptability of the location in terms of marine ecology effects as outlined in the Davidson Environmental Report in conjunction with the contextual and visual 'fit' described above will ensure that adverse natural character effects are avoided.
- 13.13 Importantly, this contextual and visual 'fit' means that the proposed mooring area will not detract from the 'sense of place' associated with the Mapua area. The relatively limited extent of the mooring area and its confinement to a part of the CMA where such activity is already concentrated will avoid the perception of the inlet/channel margins being 'hemmed in' by moored vessels.
- 13.14 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.



Figure 17: Proposed mooring area (source:TDC).



Photograph 84: Typical character of proposed mooring area to the south of the wharf.





Photograph 85: Typical character of proposed mooring area on the west side of Grossi Point.



Photograph 86: Typical character of proposed mooring area adjacent the wharf.



Photograph 87: Typical character of proposed mooring area to the north of the wharf.



Photograph 88: Typical character of proposed mooring area to the north of the wharf.



Photograph 89: Typical character of proposed mooring area to the south of the wharf.



Photograph 90: View south-westwards back towards Mapua Wharf from north end of Mapua Channel.



Photograph 91: Zoomed in view south-westwards back towards Mapua Wharf from north end of Mapua Channel.



Photograph 92: Seaward outlook from Mapua Wharf. Moturoa/Rabbit Island seen to right of view.



Photograph 93: Looking from Mapua Wharf southwards to the Waiamea Inlet.

## 14.0 Coastal Structures: Rakāuroa / Torrent Bay (ATNP)

- 14.1 The setting of Rakāuroa/Torrent Bay has been referenced in the discussion of the mooring areas at Boundary Bay and Glasgow Bay. Rakāuroa is located within ATNP and the track passes through the bay. The Rakāuroa estuary can be crossed within 2 hours either side of low tide or walkers can use an all tide track around the edges of the estuary.
- 14.2 The Torrent Bay village is located within the bay along with a scattering of holiday homes, tramping huts and campsites along the beachfront. The bay is only accessible by water or walking.
- 14.3 As outlined earlier, it is expected that an ONL classification applies to most, if not all, of ATNP. The waters of Rakāuroa have been identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 14.4 Public coastal structures for which permitted activity consent is sought include 2 timber jetties and a number of track marker poles, which indicate the low-tide ATNP walkway route across the estuary.
- 14.5 The jetties each comprise simple, weathered timber structures that are relatively visually recessive in character. The track marker poles, are simple timber marker poles that by virtue of their function are intended to be visible at some distance. All of the structures are positioned in open, intertidal portions of the bay (i.e. there is no estuarine vegetation in the immediate area to assist with the visual integration of the structures into the CMA - refer photographs overleaf).
- 14.6 Each of these structures form a long established landscape element within Rakāuroa. The jetties enable boat access for residents in the bay (noting that there is no road access to the area) and the marker poles facilitate safe passage across the estuary at low tide. As a consequence, each of these structures are integral to the existing use and appreciation of the bay by the local community and the public more generally.
- 14.7 The generally modest scale and visual character of these structures, together with their long accepted functional 'benefit' (which confers a visual 'logic' to them) means that they do not detract from the character or quality of the visual setting at Rakāuroa.
- 14.8 Unsurprisingly, the existence of these structures has not precluded the wider area rating as having High Natural Character.
- 14.9 In many respects these structures represent and enable the recreational characteristics for which the local area is so highly valued. In this way, these structures contribute positively to the landscape character and 'sense of place' of the local area.
- 14.10 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.



Photograph 94: Typical character of the Rakāuroa/Torrent Bay context.



Photograph 95: Abel Tasman Coastal Track, Rakāuroa/Torrent Bay estuary at low tide (source: Blog [Tramping in the New Zealand backcountry: NZ Bush Adventures](#))

Photograph 96 (a)-(d): Typical character of the public coastal structures for which consent is sought.



## 15.0 Coastal Structures: Marahau (ATNP)

- 15.1 The setting of Marahau has been described in the discussion of the proposed mooring area at Otuwhero Inlet. Marahau is located at the start of the ATNP and comprises a small coastal settlement accessible by road. The settlement includes a mix of permanent and holiday homes, with numerous ATNP related commercial tourism operators based in the bay.
- 15.2 As outlined earlier, it is expected that an ONL classification applies to most, if not all, of ATNP. The waters of Marahau have been identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 15.3 The public coastal structure for which permitted activity consent is sought relates to the causeway that enables access between the settlement and northern side of the bay (i.e. ATNP 'proper') across an estuary.
- 15.4 The causeway comprises a simple and relatively narrow, weathered timber structure that includes safety from falling balustrading on both sides. The causeway spans an estuarine area that supports a complex mosaic of estuarine species, conferring a degree of visual absorption capability on the immediate CMA context of the structure (refer photographs overleaf).
- 15.5 The causeway is a long established landscape element at Marahau and marks the commencement of the ATNP walkway.
- 15.6 As a consequence, the causeway is integral to the existing use and appreciation of the bay and the national park by the local community and the public more generally.
- 15.7 The generally modest scale and visual character of the structure, together with their long accepted functional 'benefit' of the causeway (which confers a visual 'logic' to them) and its visually complex context (estuarine vegetation) means that the causeway structure does not detract from the character or quality of the visual setting at Marahau.
- 15.8 Unsurprisingly, the existence of this structure has not precluded the wider area rating as having High Natural Character.
- 15.9 In many respects the causeway represents and enables the recreational characteristics for which the local area is so highly valued (i.e. the national park). In this way, the causeway makes a significant positive contribution to the landscape character and 'sense of place' of the local area.
- 15.10 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.



Photograph 97: View from the water to Marahau. Causeway just visible to the right of view.



Photograph 98 (a) – (e): Typical character of public causeway structure for which consent is sought.



## 16.0 Coastal Structures: Bark Bay (ATNP)

- 16.1 Bark Bay sits between Sandfly Bay (to the south) and Mosquito Bay (to the north) and comprises a relatively small scale, deep horseshoe shaped bay with a small spit enclosing an estuary at the base of the bay. The bay is enclosed by dense bush clad hills.
- 16.2 The national park walkway passes through the bay and there is a DoC hut and campsite in the bay. There are no dwellings at Bark Bay and the northern end of Bark Bay marks the beginning of the Tonga Island Marine Reserve which stretches northwards to Awaroa.
- 16.3 The highly attractive and relatively remote character of Bark Bay makes it very popular as a hiking, kayaking and recreational boating 'stopover'.
- 16.4 As outlined earlier, it is expected that an ONL classification applies to most, if not all, of ATNP. The waters of Bark Bay have been identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 16.5 The public coastal structures for which permitted activity consent is sought include a water pipe, timber steps on the beachfront and a timber ramp/step structure and step structure on the estuarine side of the spit.
- 16.6 The steps and ramp comprise simple, small scale and low profile, weathered timber structures that are relatively visually recessive in character. Further, these structures are seen against a visually complex vegetation backdrop which serves to further reduce their visual 'presence'.

- 16.7 The water pipe is necessarily visible as a consequence of the orange marker buoy. This aspect of the water pipe 'structure' is in keeping with the numerous other buoys that litter the coastline of the national park. The pipe sits beneath the water surface and is only visible in very close range views.
- 16.8 Each of these structures form a long established landscape element within Bark Bay. The steps/ramp and steps enable safe access onto the spit and direct access away from regenerating vegetation areas. The water pipe provides freshwater for boaties. As a consequence, each of these structures are integral to the existing use and appreciation of the bay by the public.
- 16.9 The generally modest scale and visual character of these structures, together with their long accepted functional 'benefit' (which confers a visual 'logic' to them) means that they do not detract from the character or quality of the visual setting at Bark Bay.
- 16.10 Unsurprisingly, the existence of these structures has not precluded the wider area rating as having High Natural Character.
- 16.11 In many respects these structures represent and enable the recreational characteristics for which the local area is so highly valued. In this way, these structures contribute positively to the landscape character and 'sense of place' of the local area.
- 16.12 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.



Photograph 99: Steps at Bark Bay viewed from the water.



Photograph 100: Zoomed in view of the steps at Bark Bay as viewed from the water.



Photograph 101 (a)-(c): Structures at Bark Bay for which consent is sought. (Estuary ramp and steps to right of view.)

## 17.0 Coastal Structures: Mosquito Bay (ATNP)

- 17.1 Mosquito Bay is located immediately north of Bark Bay and comprises a very small scale, shallow bay enclosed by dense bush clad hills.
- 17.2 The national park walkway does not pass through the bay, however there is a DoC campsite in the bay (that is accessed by water only). There are no dwellings at Mosquito Bay and the bay is adjacent the Tonga Island Marine Reserve which extends between the northern end of Bark Bay and Awaroa.
- 17.3 The highly attractive and relatively remote character of Mosquito Bay makes it very popular as kayaking and recreational boating 'stopover'.
- 17.4 As outlined earlier, it is expected that an ONL classification applies to most, if not all, of ATNP. The waters of Mosquito Bay have been identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 17.5 The public coastal structure for which permitted activity consent is sought relates to a single set of timber steps on the beachfront.
- 17.6 The steps comprise a simple, small scale and low profile, weathered timber structure that is relatively visually recessive in character. Further, the steps are seen against a visually complex vegetation backdrop which serves to further reduce their visual 'presence'.
- 17.7 The timber steps form a long established landscape element within Mosquito Bay and enable safe access from the beachfront to the campsite. As such, the timber steps are integral to the existing use and appreciation of the bay by the public.
- 17.8 The generally modest scale and visual character of the structure, together with their long accepted functional 'benefit' (which confers a visual 'logic' to them) means that they do not detract from the character or quality of the visual setting at Mosquito Bay.
- 17.9 Unsurprisingly, the existence of these structures has not precluded the wider area rating as having High Natural Character.
- 17.10 In many respects these structures represent and enable the recreational characteristics for which the local area is so highly valued. In this way, these structures contribute positively to the landscape character and 'sense of place' of the local area.
- 17.11 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.



Photograph 102: Closer range view from the water to the steps on the beachfront (seen to right of view).



Photograph 103: Longer range view from the water to the beachfront steps at Mosquito Bay.



Photograph 104: Zoomed in view from the water to the beachfront steps at Mosquito Bay.

## 18.0 Coastal Structures: Watering Cove (ATNP)

- 18.1 Watering Cove is located to the west of Te Karetu Point and comprises a shallow bay framed by dense bush clad hills.
- 18.2 A DoC campsite is located in the bay with track access from the main ATNP walkway. There are no dwellings at Watering Cove.
- 18.3 The highly attractive and relatively remote character of Watering Cove makes it very popular as a hiking, kayaking and recreational boating 'stopover'.
- 18.4 As outlined earlier, it is expected that an ONL classification applies to most, if not all, of ATNP. The waters of Watering Cove have been identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 18.5 The public coastal structure for which permitted activity consent is sought relates to two sets of timber steps on the beachfront.
- 18.6 The steps comprise simple, small scale and low profile, weathered timber structures that are relatively visually recessive in character. Further, the steps are seen against a visually complex vegetation backdrop which serves to further reduce their visual 'presence'.
- 18.7 The timber steps form a long established landscape element within Watering Cove and enable safe access from the beachfront to the campsite. As such, the timber steps are integral to the existing use and appreciation of the bay by the public.
- 18.8 The generally modest scale and visual character of the structure, together with their long accepted functional 'benefit' (which confers a visual 'logic' to them) means that they do not detract from the character or quality of the visual setting at Watering Cove.
- 18.9 Unsurprisingly, the existence of these structures has not precluded the wider area rating as having High Natural Character.
- 18.10 In many respects these structures represent and enable the recreational characteristics for which the local area is so highly valued. In this way, these structures contribute positively to the landscape character and 'sense of place' of the local area.
- 18.11 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.

Photograph 105 (a)-(b): Watering Cove steps.



## 19.0 Coastal Structures: Awaroa (ATNP)

- 19.1 Awaroa Bay is located within ATNP between Totaranui and Awaroa Head. A striking swathe of white sandy beach is framed by dense bush clad hills and ridgelines. An air strip and cluster of holiday homes and tourist facilities are located towards the eastern end of the bay (all accessible by water, walkway or air only).
- 19.2 A sizeable spit landform defines the Awaroa Inlet to the west and it is through the inlet that the ATNP walkway passes. The Awaroa Inlet can be crossed within 1.5 hours before and 2 hours after low tide and there is a DoC hut and campsite on the south side of the inlet.
- 19.3 As outlined earlier, it is expected that an ONL classification applies to most, if not all, of ATNP. The waters of Awaroa Bay and Inlet have been identified in a District wide Natural Character Assessment as having High Natural Character (Pacific Eco-Logic Ltd, June 2013).
- 19.4 Public coastal structures for which permitted activity consent is sought include a number of track marker poles, which indicate the low-tide ATNP walkway route across the inlet.
- 19.5 The track marker poles, are simple timber marker poles that by virtue of their function are intended to be visible at some distance. They are positioned in open, intertidal portions of the inlet (i.e. there is no estuarine vegetation in the immediate area to assist with the visual integration of the structures into the CMA - refer photograph overleaf).
- 19.6 The track marker structures form a long established landscape element within Awaroa Inlet that facilitate safe passage across the estuary at low tide. As a consequence, the structures are integral to the existing use and appreciation of the area by the local community and the public more generally.
- 19.7 The generally modest scale and visual character of these structures, together with their long accepted functional 'benefit' (which confers a visual 'logic' to them) means that they do not detract from the character or quality of the visual setting at Awaroa Inlet.
- 19.8 Unsurprisingly, the existence of these structures has not precluded the wider area rating as having High Natural Character.
- 19.9 In many respects these structures represent and enable the recreational characteristics for which the local area is so highly valued. In this way, these structures contribute positively to the landscape character and 'sense of place' of the local area.
- 19.10 On balancing these considerations, adverse visual, natural character and landscape effects are assessed to be **negligible**.



Photograph 106: Awaroa Bay viewed from the water.



Photograph 107: Awaroa Bay beachfront.



Photograph 108: Awaroa Bay beachfront.



Photograph 109: Awaroa Inlet crossing at low tide. Tracker marker visible in the distance (source: JUSTINSOMNIA blog <https://justinsomnia.org>).

## 20.0 Cumulative Effects

- 20.1 With respect to cumulative adverse 'landscape' effects, the extensive scale of the Tasman District coastline and the generously spaced arrangement of the proposed mooring areas will ensure that the Tasman District coastline does not read as dominated by moored vessels.
- 20.2 The very discreet nature of the proposed coastal structures, together with their spacious arrangement within ATNP will ensure that they do not read as a dominant coastal element within this stretch of the District's coastline.

Bridget Gilbert  
Landscape Architect  
B. Hort. Dip. L.A. ALI ANZILA (Registered)  
M 021 661650 E [bridget@bglan.z](mailto:bridget@bglan.z)



## Appendix 1: Assessment of Landscape and Visual Effects

### General

Landscape, natural character and visual impacts result from natural or induced change in the components, character, or quality of landscape. Usually these are the result of landform or vegetation modification or the introduction of new structures, activities, or facilities into the landscape.

Landscape effects include effects on topographic, vegetative, and hydrological features. Landscape effects also refer to impacts on settlement patterns, historic and cultural features, and the general landscape character or 'sense of place' of an area. It is widely agreed that landscape character (and effects) embrace three components:

- Biophysical attributes and values.
- Perceptual (or experiential) attributes and values.
- Associative attributes and values.

Adverse impacts upon landscape characteristics and values typically arise where discontinuity or discord is evident between what is proposed, and both the existing environment which provides its setting and the environment foreseeable in terms of the relevant statutory documents. In this instance, the main concerns in relation to any discontinuity or discord arise from the effects of the proposed development on the landscape character of this portion of the Tasman District.

Natural character effects form a component of landscape effects and embrace the biophysical and experiential aspects of landscape character, with a strong overlap between landscape and natural science expert inputs. In this instance, expert natural science input relies on the Davidson Environmental Report.

Visual effects also form a component of landscape effects. This assessment analyses the potential visual effects that may be generated by the proposal and is based on:

- the background and context within which the development would be viewed;
- the proportion of the built form (including earthworks) that will be visible, determined by the observer's position relative to the objects being viewed;
- the number and type of viewers and their location in relation to the site; and
- the ability to integrate structures and activities with mitigation planting.

Visual effects are ranked as follows:

- **Very High** – corresponds to a situation where the proposed development will significantly (negatively) change the character or quality of the existing visual landscape or outlook;
- **High** – corresponds to a situation where the proposed development will generate a high adverse effect on the character or quality of the existing visual landscape or outlook, with the scale of adverse effect considered to *'extend above the normal level, or be great in amount, value, size or intensity'*;

- **Moderate** – corresponds to a situation where the proposed development will comprise an adverse effect on the character or quality of the existing visual landscape or outlook, with the scale of adverse effect considered to be *'average in amount, intensity or degree'*;
- **Low** – corresponds to a situation where the proposed development is unlikely to comprise an adverse effect on the character or quality of the existing visual landscape or outlook, with the scale of adverse effect considered to be *'below average in amount, extent or intensity'*; and,
- **Negligible** – corresponds to a situation where the proposed development is barely discernible with respect to effects in relation to existing visual landscape or outlook.

Effects in relation to landscape (and natural character) values are rated as follows:

- **Very High** – corresponds to a situation where the proposed development will significantly (negatively) change the character or quality of the existing landscape (or natural character) values of the site and/or the surrounding area;
- **High** – corresponds to a situation where the proposed development will generate a high adverse effect on the character or quality of the existing landscape (or natural character) values of the site and/or surrounding area, with the scale of adverse effect considered to *'extend above the normal level, or be great in amount, value, size or intensity'*;
- **Moderate** – corresponds to a situation where the proposed development will comprise an adverse effect on the character or quality of the existing landscape (or natural character) values of the site and/or the surrounding area, with the scale of adverse effect considered to be *'average in amount, intensity or degree'*;
- **Low** – corresponds to a situation where the proposed development is unlikely to comprise an adverse effect on the character or quality of the existing landscape (or natural character) values of the site and/or the surrounding area, with the scale of adverse effect considered to be *'below average in amount, extent or intensity'*; and,
- **Negligible** – corresponds to a situation where the proposed development is barely discernible with respect to effects in relation to landscape (or natural character) values of the site and/or the surrounding area.

For the purposes of evaluating the significance of effects, effects ratings of **High** or **Very High** correspond to a 'significant' adverse effect. Effects ratings of **Low** correspond to a 'minor' adverse effect.

# Proposed Mooring Areas

## Assessment of Demand and the Impact on Recreation and Navigation



## 1. Introduction

The coastline of the region offers recreational boating opportunities to both locals and visitors. Commercial use of boats and other craft are also a significant feature of the region's tourism, marine farming and fishing industries. While many of the smaller recreational and commercial passenger craft are stored on dry land and have no need for water-based storage, there are many boats that do need some form of mooring, or berthage.

Moorings generally provide a convenient and readily available form of boat storage. The limited number of suitable or accessible locations for moorings within the region mean that they tend to be grouped in particular areas such as Kaiteriteri and Mapua. Individual moorings have been established in other locations, providing a place for occasional recreational users and adjoining landowners to moor their boats. Many of the moorings (a mix of "all tide" and "dry") have been in place for decades and the use of the area for mooring is a long established historical use.

The locations suitable for moorings are limited to those that are reasonably sheltered from prevailing winds and can be readily accessed. These locations are often used for other recreational activities such as anchoring which has led to the development of a framework to manage competing demands. The policy and rules regarding moorings were initially developed in the mid-1990's and since then changes to the type and demand for moorings has prompted Council to review the rules.

After considering the options and feedback from consultation Council has decided to implement a new framework which makes the activity of mooring permitted in defined mooring areas, subject to the mooring owner holding a mooring licence issued by the Harbourmaster. This report forms part of the assessment of effects of the proposed new framework, and specifically assesses the need or demand for moorings within the proposed mooring areas and the potential impact on other recreational users, including the effects on navigation and safety.

## 2. Method

Literature review:

- Council and Department of Conservation Publications
- Tourism websites
- Organisation websites
- Reserve Management Plans

Discussions held with:

- R. Squire (Coastal Planner)
- D. Cairney (Harbourmaster)
- A. Swanson (Deputy Harbourmaster)

Feedback from the discussion document – Review of Mooring Management

No feedback was received from the MSA regarding the proposed mooring areas.

## 3. Executive Summary

This report assesses the need or demand for moorings within the proposed mooring areas and the potential impact on other recreational users, including the effects on navigation and safety.

National and regional recreation surveys suggest that boating and fishing are consistently popular recreational activities in New Zealand and it is likely the trend for increasing number of pleasure boats will continue. Regional results show high rates of participation in fishing activities in the district and strong population growth, both are suggestive of continued demand for pleasure boats within the District. While the storage of smaller boats may be achieved on land, the requirement for larger boats is likely to result in sustained and increasing demand for moorings and berths within the Tasman Region.

A qualitative assessment was undertaken for each of the proposed mooring areas and an estimate was made regarding the number of moorings that could be accommodated within the area. Each of the 12 areas proposed mooring areas were historical moorings areas which had a number of consented and unconsented moorings located within in them. The assessment identified demand (current and/or future) for mooring in all the proposed mooring areas, with current demand unlikely to be met in the areas proposed for Kaiteriteri and Otuwhero.

A review was undertaken regarding the recreational use in and around the proposed mooring areas to establish if the proposed mooring areas would adversely impact on the recreational use of the area, including matters of navigation and safety. It was considered that the establishment of moorings within the mooring area would not affect existing recreational use and would generally have a positive effect through the provisions of safe locations for boat storage.

## 4. The Proposal

Tasman District Council intends to establish 12 mooring areas, which will permit the activity of mooring subject to conditions, including the mooring owner holding a mooring licence issued under the Navigational and Safety Bylaw (2015). An assessment of the potential number of moorings that could be established in each area has been made by the harbourmaster and deputy harbourmaster and this report is based on that assessment. The estimates were calculated using a mix of existing use patterns and/or an average 15m radius swing circle for additional moorings. In locations where the demand for moorings is likely to be high, e.g. Kaiteriteri, the estimates were based on the use of more efficient mooring systems like fore and aft moorings.

It is acknowledged that the estimates are more qualitative than quantitative and the total number of moorings located in any one area, at any one time, will largely be determined by the size and types of boat mooring in the area and the physical characteristics affecting that specific location.

The maximum number of moorings for each area was estimated at:

Map1 - Mapua	42
Map 2 - Motueka 1	13
Map 3 - Motueka 2	20 (average 16)
Map 4 - Tapu Bay	4 (or 8)
Map 5 - Stephens Bay	13
Map 6 - Kaiteriteri	24
Map 7 - Outwhero - Marahau	4 (or 6-8)
Map 8 - Glasgows and Torrent Bays	11
Map 9 - Boundary Bay	8
Map 10 - Ligar Inlet	6
Map 11 - Milnthorpe	5
Map 12 - Mangarakau Wharf	8

## 5. Demand for Moorings

### 5.1 National/Regional Trends

There are no specific recorded figures for recreational use of boats or demand for moorings in Tasman but the following information taken from the Maritime New Zealand (2007) Pleasure Boating Safety Strategy<sup>1</sup> and Sport and Recreation New Zealand publications is a useful indicator of demand.

- The number of pleasure craft in New Zealand continues to grow and in 2012 was estimated at 900,000.
- Increased spending on boats has seen a trend towards large, faster craft and many smaller craft such as kayaks entering the market.
- The number of small craft is growing with tens of thousands of kayaks manufactured in 2007.
- The number of larger craft has also grown, with different types of boats now available, enabling boaties to access a range of areas.
- The number of people who go boating has remained constant; with 1.5 million New Zealanders (2007) making a voyage in pleasure craft each year, or one in three New Zealanders.
- Changes in standards of living and the way New Zealanders live has also been reflected in boat types and usage with increasing pressure on facilities and more congestion in popular places especially over the summer months.

Sport and Recreation New Zealand<sup>2</sup> estimated that in 2001, 5% of all New Zealand adults went yachting or sailing and by age group. Yachting or sailing was the fourth most important sport for 35 to 49 year olds and the second most important sport for 50 to 64 year olds. For the Tasman region (including Nelson and Marlborough)<sup>3</sup> a 2007/08 survey found that 39.5 % of men and 18.5% of women had participated in fishing (marine and freshwater) in the previous 12 months and nationally 6.4% of people had participated in canoeing/kayaking within the previous year. <sup>4</sup>

While the figures are variable it appears that boating and fishing are consistently popular recreational activities in New Zealand and it is likely that the trend for increasing numbers of pleasure boats in use will continue. In addition, the population of Tasman is predicted to grow by 9% in the next 15 years<sup>5</sup> and as a consequence it is anticipated the number of people in the District who own a pleasure craft will also increase. While the storage of smaller boats may be achieved on land, the demand for larger boats is likely to result in a sustained and increasing demand for moorings and berths in the Tasman region.



*Photo 1: Port Tarakohe (Nov 2014)*

<sup>1</sup> Maritime New Zealand (2008) Boating Safety Strategy - 2007 Review of the New Zealand Pleasure Boat Safety Strategy. Maritime New Zealand, Wellington, New Zealand.

<sup>2</sup> Sport and Recreation New Zealand. (2001) *SPARC Facts '97-01'*. Wellington: SPARC.

<sup>3</sup> Sport and Recreation New Zealand. (2009). *Sport, Recreation and Physical Activity Profile: Tasman Region 2007/08*. Wellington: SPARC.

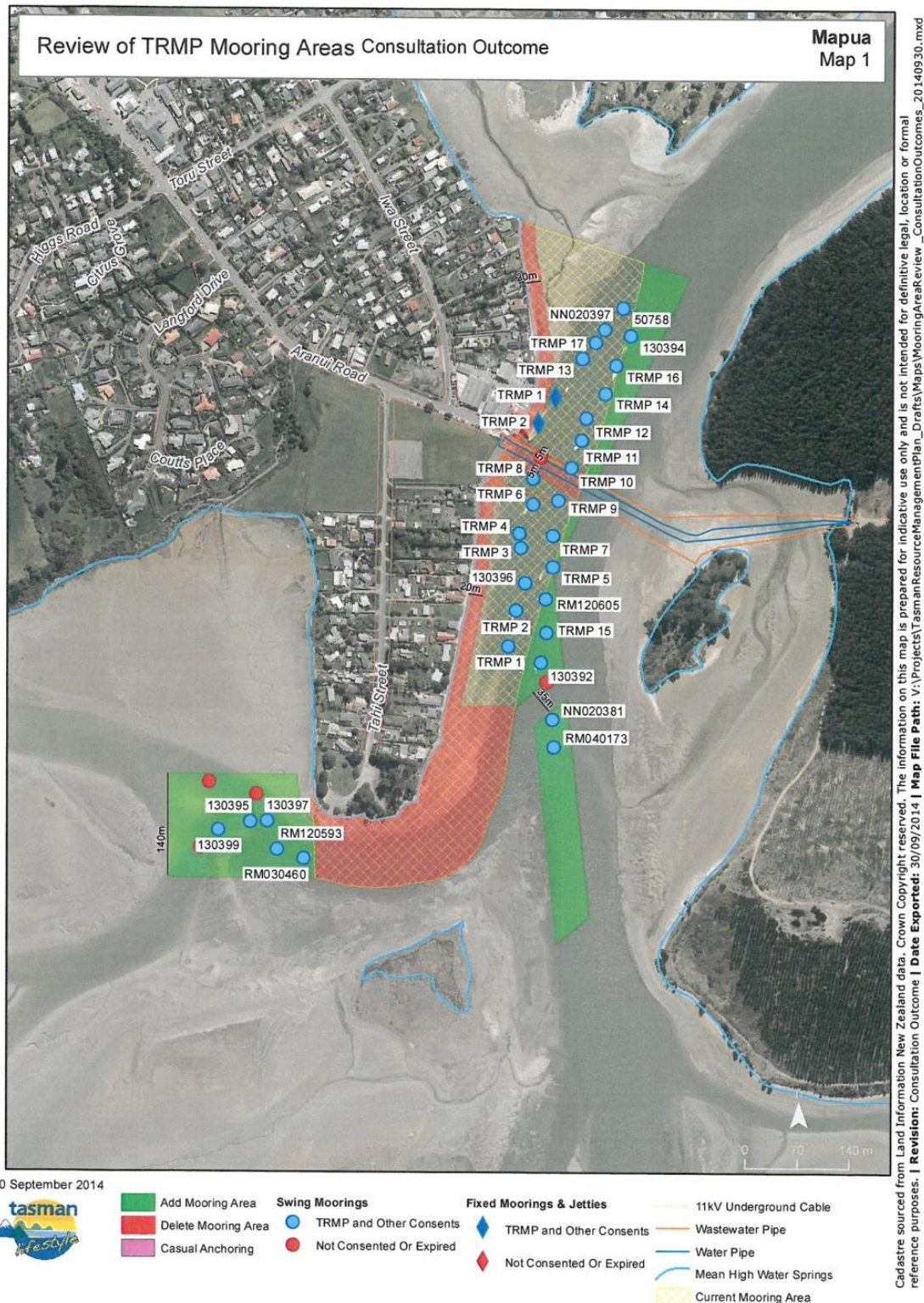
<sup>4</sup> Sport and Recreation New Zealand (2009). *Sport and Recreation Profile: Canoeing/Kayaking – Findings from the 2007/08 Active NZ Survey*. Wellington: SPARC

<sup>5</sup> Tasman District Council Growth Model - 2014 Review

## 6. Assessment of Demand for Each Mooring Area

### 6.1 Map 1 - Mapua

The proposed mooring area adjoins Mapua township with access from the wharf and Grossi Point reserve. The mooring area experiences strong tidal currents which can place limitations on the type and size of boat that can moor there, however, the area is one of the few all tide mooring areas in the district. The mooring area is the closest to the township of Richmond and the combined population of Richmond, Mapua and the neighbouring Ruby Bay is over 15,000 (2011). The Mapua/Ruby Bay/ Richmond population is expected to increase by 9% in the next 15 years.<sup>5</sup>



Mapua currently has one of the highest concentrations of moorings in the district with 30 authorised moorings located in the area. The majority of the moorings were established decades ago under the Harbours Act 1950, at a time when no authorisation was required. Since 2000 five new moorings have been established and a similar number of pre 1991 moorings have been removed (withdrawn/surrendered/expired). Council has not received many enquiries regarding the establishment of new moorings in the main mooring area, this may be due to a belief that the area is full or it could be due to limitations and maintenance requirements arising from the tidal current. The five new moorings were established on the periphery of the existing areas.

Demand for new moorings in Mapua appears to be low, however, given the expected increase in population and the limited number of all tides moorings within the district, it is anticipated that demand for a permanent mooring area in Mapua is consistent and will increase over time.

## 6.2 Map 2 - Motueka 1

The Motueka 1 mooring area adjoins the Port of Motueka, which consists of well-established marinas for the Powerboat Club, Yacht Club and Peninsula Society. Access to the mooring area is tidally restricted and dries for a significant part of the tidal cycle. There are two<sup>6</sup> existing authorised moorings within the proposed area and approximately 23 unauthorised moorings.



*Photo 2: Motueka 1 (Nov 2014)*

The plan currently provides for moorings as a controlled activity in an area significantly larger than is proposed (see the area below). The controlled activity area is largely impractical for mooring and is within an area with nationally significant natural ecosystem values<sup>7</sup>. Council has consequently made the decision to reduce the mooring area to the area currently occupied by moorings.

---

<sup>6</sup> Council has received a third application for a mooring but the application is currently on hold at the request of the applicant.

<sup>7</sup> Department of Conservation (1993). Internationally and nationally important coastal areas from Kahurangi Point to Waimea Inlet, Nelson, New Zealand: recommendations for protection. Occasional Publication 14.



30 September 2014



- |   |  |  |  |
|---|--|--|--|
| <span style="display:inline-block; width:15px; height:15px; background-color:lightgreen; border:1px solid black;"></span> Add Mooring Area    | <b>Swing Moorings</b>  | <b>Fixed Moorings &amp; Jetties</b>  | <span style="display:inline-block; width:15px; border-bottom:1px solid yellow;"></span> 11kV Underground Cable                           |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightcoral; border:1px solid black;"></span> Delete Mooring Area | <span style="display:inline-block; width:10px; height:10px; border:1px solid blue; border-radius:50%;"></span> TRMP and Other Consents | <span style="display:inline-block; width:10px; height:10px; border:1px solid blue; border-radius:50%;"></span> TRMP and Other Consents | <span style="display:inline-block; width:15px; border-bottom:1px solid brown;"></span> Wastewater Pipe                                   |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightpink; border:1px solid black;"></span> Casual Anchoring     | <span style="display:inline-block; width:10px; height:10px; border:1px solid red; border-radius:50%;"></span> Not Consented Or Expired | <span style="display:inline-block; width:10px; height:10px; border:1px solid red; border-radius:50%;"></span> Not Consented Or Expired | <span style="display:inline-block; width:15px; border-bottom:1px solid blue;"></span> Water Pipe   |
|   |  |  | <span style="display:inline-block; width:15px; border-bottom:1px solid blue; border-top:1px solid blue;"></span> Mean High Water Springs |
|   |  |  | <span style="display:inline-block; width:15px; height:15px; border:1px dashed yellow;"></span> Current Mooring Area                      |

Cadastral sourced from Land Information New Zealand data. Crown Copyright reserved. The information on this map is prepared for indicative use only and is not intended for definitive legal, location or formal reference purposes. | Revision: Consultation Outcome | Date Exported: 30/09/2014 | Map File Path: V:\Projects\TasmanResourceManagementPlan\_Drafts\Maps\MooringsAreaReview\_ConsultationOutcomes\_20140930.mxd

The three marinas adjoining the proposed mooring area are currently full with demand for more berths, particularly during the off season when the commercial tourist operators berth their boats for the winter. The two consented moorings in the proposed mooring area were issued to a commercial operator. Access to the mooring area is currently limited by tide and occasionally weather, should access improve through dredging or natural changes to the channel then demand for moorings is likely to increase.<sup>8</sup>

<sup>8</sup> Pers Com. A Swanson Feb 2015





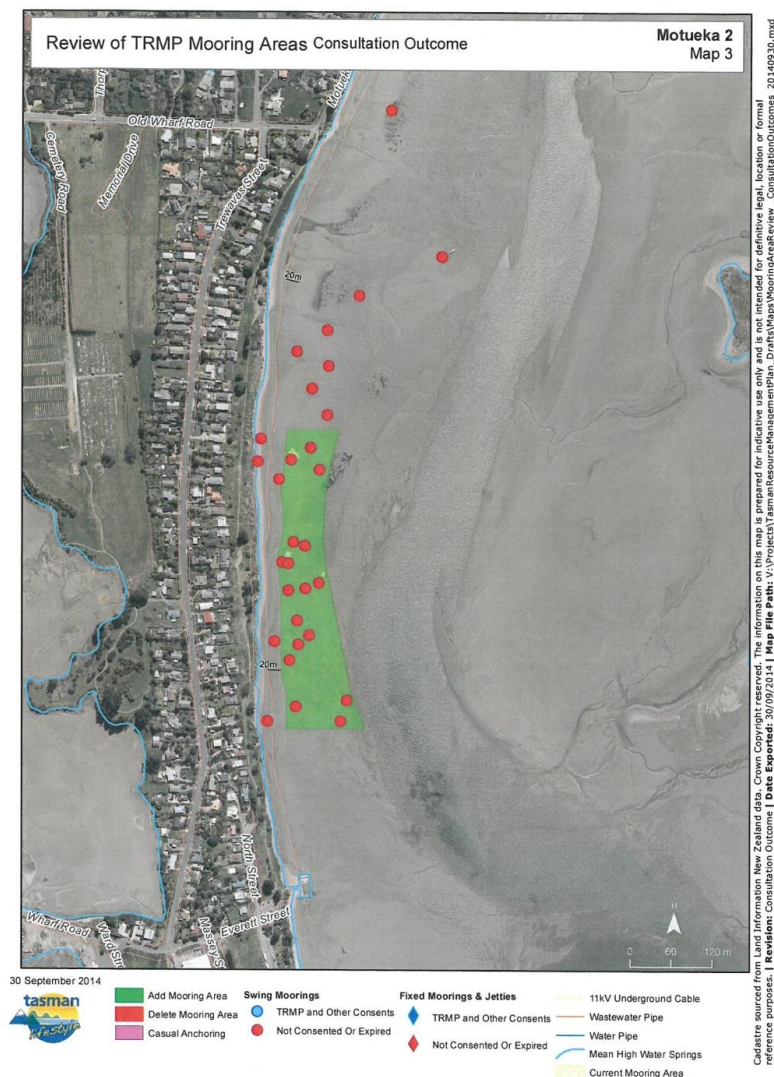
Photo 3: Motueka 1 (Nov 2014)

There were four boats moored/ anchored in the proposed mooring area on both site visits and between four to nine boats were noted in aerial photos (from 2001). The four boats appeared to be privately owned boats. It is estimated that up to 13 partial tide moorings could be located in the proposed area, which could leave a shortfall of 10 should all current mooring owners seek moorings licenses.

It appears that the proposed mooring area would meet current use, but demand could be exceeded, particularly if access by water was improved.

### 6.3 Map 3 - Motueka 2

A new mooring area is proposed in front of the residential houses at Trewavas Street. The area is accessed through the adjoining residential properties and the foreshore reserve.



There are a number of dinghies and small boats stored on the adjoining foreshore reserve and 18 unauthorised moorings within the proposed area. No resource consent applications have been received by Council for moorings in this area, despite the area being extensively used to moor boats over a number of years. Two or more of the boats currently moored in the area are unused commercial boats, but otherwise it is uncertain who the moorings/boats belong to and as such demand is difficult to determine.



*Photo 4: Motueka 2 (Nov 2014)*

The area extensively dries out during low tide so use is restricted. Narrow access lanes and the distance from roads (up to 500m) may limit the type of boat that can be provisioned (e.g. refuelling) in that location<sup>9</sup>. It is estimated that up to 20 moorings could be located in the proposed area with 16 moorings a realistic number. Eleven boats were moored along the foreshore at the time of the site visit and a number of additional small boats beached on the reserve were also noted. From the aerial photos (from 2001) between 8 to 10 boats are visible within the area.

Demand for this area is unknown, but given that the area is accessible; in a residential area and adjoins the popular and growing township of Motueka it is likely that demand will be consistent and grow over time. The proposed area will meet the needs of the currently moored boat owners, however, should all mooring owners in the area seek a mooring licence then there will be a shortfall of 10 -15 moorings.

## **6.4 Map 4 - Tapu Bay**

The proposed mooring area adjoins the Stephens/Tapu Bay residential area and is 2 km south of the larger township of Kaiteriteri. The proposed area extensively dries during low tide which limits boat access. Vehicle access to the area is via a steep, unformed road which leads to the Tapu Bay Reserve. It is estimated that four moorings could be established in the proposed mooring area.

---

<sup>9</sup> Pers Comm A Swanson Feb 2015



30 September 2014



- |  |   |   |  |
|--|---|---|--|
| <span style="color: green;">■</span> Add Mooring Area  | <b>Swing Moorings</b>                                       | <b>Fixed Moorings &amp; Jetties</b>                         | <span style="color: yellow;">—</span> 11kV Underground Cable |
| <span style="color: red;">■</span> Delete Mooring Area | <span style="color: blue;">●</span> TRMP and Other Consents | <span style="color: blue;">◆</span> TRMP and Other Consents | <span style="color: orange;">—</span> Wastewater Pipe        |
| <span style="color: purple;">■</span> Casual Anchoring | <span style="color: red;">●</span> Not Consented Or Expired | <span style="color: red;">◆</span> Not Consented Or Expired | <span style="color: blue;">—</span> Water Pipe               |
|  |   |   | <span style="color: blue;">—</span> Mean High Water Springs  |
|  |   |   | <span style="color: yellow;">▨</span> Current Mooring Area   |

Collected sourced from Land Information New Zealand data. Crown Copyright reserved. The information on this map is prepared for indicative use only and is not intended for definitive legal, location or formal reference purposes. | Revision: Consultation Outcome | Date Exported: 30/09/2014 | Map File Path: V:\Projects\TasmanResourceManagementPlan\_Drafts\Maps\MooringAreaReview\_ConsultationOutcomes\_20140930.mxd



Photo 5: Tapu Bay (Jan 2015)

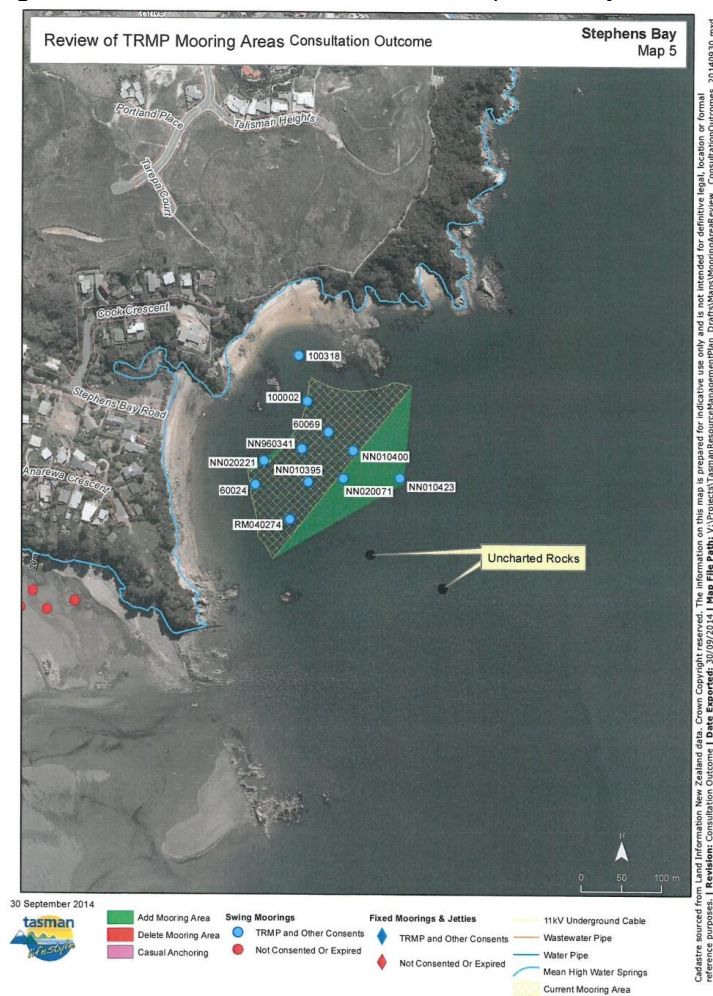
The area contains 15 unauthorised moorings which are thought to belong to Stephens/Tapu Bay residents and if that is correct then the demand for further moorings in the area may be relatively static as the residential area is largely developed. However, as the adjoining Stephens Bay mooring area is almost full, any further demand for moorings by the residents will need to be met in this area or elsewhere. There were no boats in Tapu Bay during the November site visit and two boats during the January site visit. Aerial photos (from 2001) show between 0 and 4 boats visible in the area. In the *Assessment of Feedback on TRMP Mooring Review* it was suggested by staff that the size of the area should be reduced as there appeared to be limited use and no specific demand for the area. The Council agreed and the area was reduced to the mapped area shown above.

There are 15 unauthorised moorings in the Bay and it is assumed that demand could exceed the four mooring sites that could be established. The Harbourmaster sees value in retaining the larger, originally proposed area, which could contain up to eight mooring sites. The Harbourmaster believes the site could be useful in providing storage for some types of boats unable to be moored in the neighbouring Stephens Bay and Kaiteriteri which are close or at capacity<sup>10</sup>.

Overall, it is considered that there is currently limited demand for moorings in the proposed mooring area, however there is likely to be demand in the future and it is recommended that consideration be given to enlarging the proposed area to that originally proposed.

### 6.5 Map 5 - Stephens Bay

Stephens Bay has a well-established existing mooring area containing eight consented moorings. It is proposed that the area be extended seaward to incorporate two additional consented moorings and landward to incorporate another consented mooring. Stephens Bay is well used with access from the beach and the boat ramp. It is surrounded by residential dwellings with a large new area of residential development occurring on the hills between Kaiteriteri and Stephens Bay.



<sup>10</sup> Pers Comm D Cairney Dec 2014

There are 12 authorised moorings in the proposed mooring area, three or four of the moorings are used by local commercial operators with the remaining held by a mix of residents, holiday home owners and people who reside outside of the district. Two moorings were established prior to 2000, seven between 2001 to 2009 and three moorings since 2010. Demand appears to have been relatively recent and steady. Feedback from consultation suggests that only three to five of the existing moorings are regularly used. The Harbourmaster has identified limited potential for further moorings to establish in the area, however, the site is quite exposed so demand may not be as high as it might otherwise be expected for an all tide site.

## 6.6 Map 6 - Kaiteriteri

Kaiteriteri is the centre of the tourist industry for the Abel Tasman National Park with at least eight marine tourist operators based there. Kaiteriteri and the camping ground are also very popular with locals and visitors who use the beach to access the coastal marine area.

There are 22 authorised moorings located in the bay and three unauthorised moorings. Two commercial boats semi permanently anchor in the bay. Sixteen of the authorised moorings are managed by the Kaiteriteri Reserve Board (including one for the launch warden) and the remainder are held by commercial operators and two private individuals.



Cadastral sourced from Land Information New Zealand data. Crown Copyright reserved. The information on this map is prepared for indicative use only and is not intended for definitive legal, location or formal reference purposes. | Revision: Consultation Outcome | Date Exported: 30/09/2014 | Map File Path: V:\Projects\TasmanResourceManagementPlan\_Drafts\Maps\Moorings\Kaiteriteri\_ConsultationOutcomes\_20140930.mxd

The Kaiteriteri Recreation Reserve Board (KRRB) holds resource consent until 2028 for the establishment of 13 seasonal moorings (November to April) and two permanent moorings in the mooring area closest to shore. The KRRB moorings have been placed in the same general area of the Bay for over 40 years and are rented out by KRRB to landowners and visitors. The purpose of the seasonal moorings is to relieve summer congestion and they are removed in winter when there is little demand. The two permanent moorings are available for use all year. Demand for recreational moorings is high over summer with demand exceeding supply.



*Photo 6: Kaiteriteri (Jan 2015)*

The second mooring area (seaward) contains four moorings in deeper water which are used by two commercial operators and two private individuals. There are two other moorings permitted by the current plan which are currently outside the proposed mooring area.

The tourism industry has grown significantly over the last 20 years with a trend for more and bigger boats operating out of the Bay. While some boats relocate to other locations such as Port Motueka over the winter months this is not considered practicable during the summer months when the boats are operating for longer hours and access is dependent on weather and tide. There are currently insufficient moorings available for all commercial operators operating from the bay. Council has received enquiries and requests on a number of occasions by private individuals and commercial operators wanting to place additional moorings at Kaiteriteri. Policy in the Plan currently prevent the establishment of new moorings in the area and anecdotal evidence suggests that the number of illegal moorings and semi-permanent anchoring in the bay is increasing in response to unmet demand.

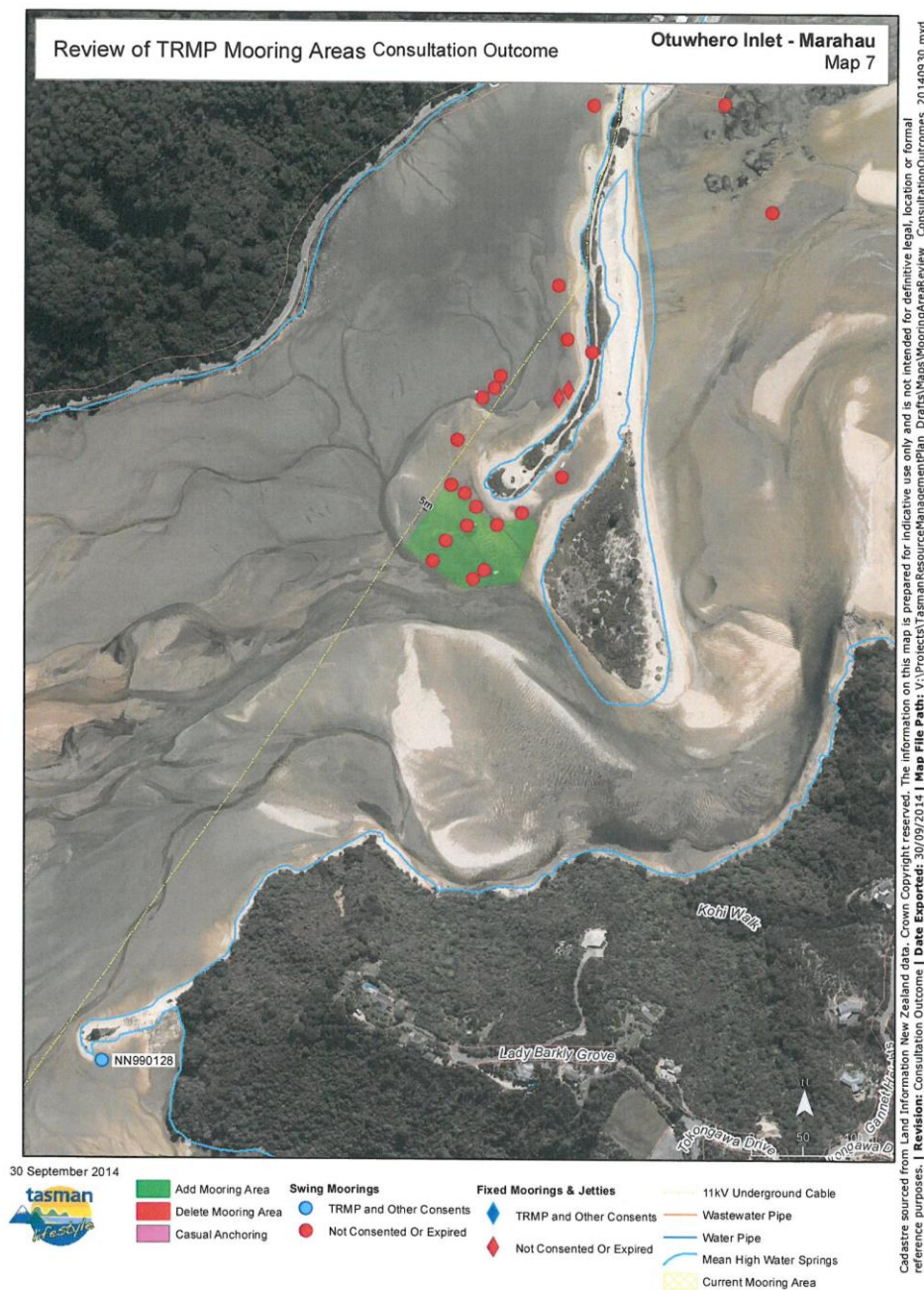


*Photo 7: Kaiteriteri Bay (Nov 2014)*

The moorings in the seaward proposed mooring area are currently defined as permitted activities in the Plan and the mooring layout is inefficient. The Harbourmaster considers that even with a more efficient swing mooring layout there will be insufficient space available for those boats that currently moor within the Bay. The use of different mooring systems such as fore and aft moorings would achieve more efficient use of this space. However, it is unlikely further demand for permanent moorings could be accommodated without reducing the area available to other recreational users, unless a very different approach is taken to boat storage in Kaiteriteri.

## 6.7 Map 7 - Otuwhero - Marahau

The proposed mooring area is near the small settlement of Marahau and close to the boundary of the Abel Tasman National Park. The number of people travelling through and staying in Marahau swells during the summer months, with an estimate of more than 2000 people per day accessing the Park via Marahau at the peak of the season (2012)<sup>11</sup>. Visitation is highly seasonal with 80% of use occurring between November to April each year. The population of Marahau is likely to grow slowly<sup>12</sup> over time with development opportunities existing within the township.



<sup>11</sup> Department of Conservation & Tasman District Council (2012) Abel Tasman Foreshore Scenic Reserve Management Plan. Nelson, New Zealand  
<sup>12</sup> Tasman District Council Growth Model - 2014 Review.

No applications have been received by Council for moorings in this area, even though the area is already extensively used for mooring boats. There are 10 unauthorised moorings in the proposed area and a further nine located in the immediate area. The area extensively dries out during low tide which limits accessibility. There is rough vehicle access along the sand spit but recent erosion of the spit and further planned development work may reduce this to pedestrian access only. There is a car park at the base of the spit. North of the proposed mooring area is a boat launching ramp which is predominantly used by commercial operators to launch their boats.

There is little information regarding the ownership of moorings. Anecdotal evidence suggests that one/two of the boats are used as live-aboard accommodation and some are owned by local residents. Feedback from consultation suggests that the area is heavily used during summer but not so well used during the rest of the year. During the two site visits in November the number of boats moored/anchored in the area was around 10 and the number of boats moored/anchored during the January site visit exceeded 20. Local anecdotal observation noted that the number of long term boats had decreased within the last year.



*Photo 8: Otuwhero (Nov 2014)*



*Photo 9: Otuwhero (Jan 2015)*





*Photo 10: Otuwhero (March 2015)*

Feedback suggests that there is an issue with boats being abandoned. The Harbourmaster confirmed that two derelict/abandoned boats were disposed of during the past year.

The presence of 19 unauthorised moorings in the immediate area suggests there is demand for moorings. It is estimated that only four moorings can be established in the proposed area which means there is likely to be unmet demand for moorings in this area. Unmet demand could be met in part by semi-permanent anchoring in the area. It is recommended that Council reconsider the size and location of the mooring area to accommodate current use.

## **6.8 Map 8 - Torrent Bay**

The Torrent Bay settlement was surveyed as a village in the 1920s and remained in private ownership when the Abel Tasman National Park was established. There is no road access to the properties with residents and visitors relying on commercial boat transport or private craft to access the properties. There are 10 existing moorings which are currently authorised by resource consent. The consent for these moorings does not expire until 2029.



30 September 2014



- |  |  |   |   |  |
|--|--|---|---|--|
| <span style="display:inline-block; width:15px; height:15px; background-color:green; border:1px solid black;"></span> Add Mooring Area  | <b>Swing Moorings</b>  | <span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black;"></span> TRMP and Other Consents | <b>Fixed Moorings &amp; Jetties</b>   | <span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> 11kV Underground Cable |
| <span style="display:inline-block; width:15px; height:15px; background-color:red; border:1px solid black;"></span> Delete Mooring Area | <span style="display:inline-block; width:15px; height:15px; border:1px solid blue; border-radius:50%;"></span> TRMP and Other Consents | <span style="display:inline-block; width:15px; height:15px; background-color:red; border:1px solid black;"></span> Not Consented Or Expired | <span style="display:inline-block; width:15px; height:15px; border-left:2px solid blue; border-right:2px solid blue;"></span> TRMP and Other Consents | <span style="display:inline-block; width:15px; height:15px; border-bottom:2px solid brown;"></span> Wastewater Pipe                          |
| <span style="display:inline-block; width:15px; height:15px; background-color:purple; border:1px solid black;"></span> Casual Anchoring |  |   | <span style="display:inline-block; width:15px; height:15px; border-left:2px solid red; border-right:2px solid red;"></span> Not Consented Or Expired  | <span style="display:inline-block; width:15px; height:15px; border-bottom:2px solid blue;"></span> Water Pipe                                |
|  |  |   |   | <span style="display:inline-block; width:15px; height:15px; border-bottom:2px solid blue;"></span> Mean High Water Springs                   |
|  |  |   |   | <span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:2px dashed black;"></span> Current Mooring Area  |

Cadastre sourced from Land Information New Zealand data. Crown Copyright reserved. The information on this map is prepared for indicative use only and is not intended for definitive legal, location or formal reference purposes. | Revision: Consultation Outcome | Date Exported: 30/09/2014 | Map File Path: V:\Projects\TasmanResourceManagementPlan\_Drafts\MooringsAreaReview\_ConsultationOutcomes\_20140930.mxd



*Photo 11: Torrent Bay <sup>13</sup>*



*Photo 12: Torrent Bay (Jan 2015)*

The New Zealand Cruising Guide<sup>14</sup> identifies Torrent Bay as the most popular anchorage in Abel Tasman National Park and the Charter Guide<sup>15</sup> describes the area as the “only good big boat anchorage” in the Park. The Department of Conservation has recorded up to 21 boats per night using Torrent Bay (1991-2).<sup>16</sup> A previous Harbourmaster<sup>17</sup> noted more than 100 boats rafted together at New Year. There is demand from commercial operators to moor in the adjoining Anchorage area.

---

<sup>13</sup> <http://www.baldwin.org.nz/images/adventurephotos/honeymoonbay/PC300251s.JPG>

<sup>14</sup> Murray, K. (2013) New Zealand Cruising Guide- Central Area. Stevens Publications. Wellington, New Zealand

<sup>15</sup> [http://www.charterguide.co.nz/Q\\_area.htm](http://www.charterguide.co.nz/Q_area.htm)

<sup>16</sup> Department of Conservation (1993). Internationally and nationally important coastal areas from Kahurangi Point to Waimea Inlet, Nelson, New Zealand: recommendations for protection. Occasional Publication 14.

<sup>17</sup> Graham Caradus( comment from A Swanson)



Photo 13: Anchorage<sup>18</sup>

The Plan currently limits the ownership of new moorings to those owning land in the bay with the establishment of new moorings subject to an assessment of effects. There are 46 built properties (plus three un-built) in Torrent Bay and 11 existing moorings (with one being located in Anchorage) associated with those properties. If all landowners in Torrent Bay required moorings then there would be demand for a further 38 moorings in the vicinity. Council granted two new applications for a mooring in 2012 with the majority of consents initially granted in 1994 and subsequently renewed at expiry of the term. Anecdotal evidence suggests that it may now be less convenient for landowners to use commercial transport and as a consequence there may be an increase in the use of personal craft to access properties and demand for further moorings<sup>19</sup>. It is estimated that there may be room for one additional mooring within the constraints of the location.

## 6.9 Map 9 - Boundary Bay

The Boundary Bay also adjoins the Abel Tasman National Park and contains eight privately owned properties. There is no road access to the properties with residents and visitors relying on commercial boat transport or private craft to access the properties. There are eight existing moorings which are currently authorised by resource consent. The majority of these consents do not expire until 2029. The LINZ Nautical Chart 6144 and the New Zealand Cruising **Guide**<sup>10</sup> identify Boundary Bay as a safe anchoring area.

The Plan currently limits the ownership of new moorings to those owning land in the bay with the establishment of new moorings subject to an assessment of effects. There are six built properties (plus two un-built) in Boundary Bay and eight existing moorings associated with those properties. The most recent consents were granted in 2013, 2009 and 2008. Five Boundary Bay properties have moorings associated with them, and one of those properties holds four of the eight mooring consents. Of the three properties without a mooring consent, two have not been developed and one has mooring access from the adjoining bay.

It appears that there is sufficient room within the proposed mooring area to meet current demand. However, if the two undeveloped sections require mooring access then there will be a shortfall in mooring space. There may also be demand for moorings in Boundary Bay by Torrent Bay residents if mooring space is unavailable within that area. Potentially there is room to establish one additional mooring.

<sup>18</sup> <http://4time2fun.com/wp-content/uploads/2013/08/anchorage-Torrent-Bay-abel-tasman-national-park-new-zealand.jpg>

<sup>19</sup> Pers Comm. A Swanson Feb 2015



Photo 14: Boundary Bay (Jan 2015)



30 September 2014

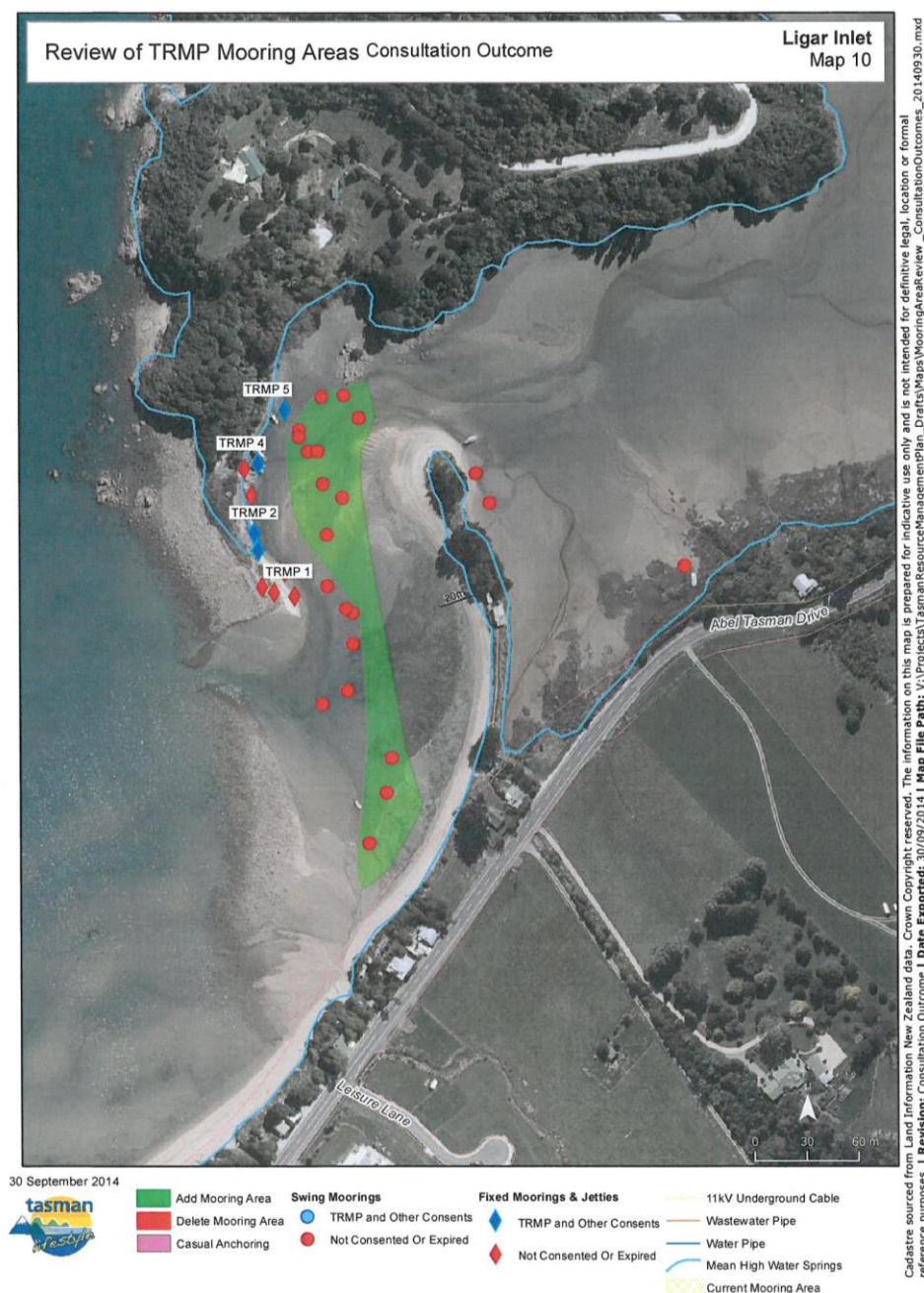
- |  |   |   |  |
|--|---|---|--|
| <span style="color: green;">■</span> Add Mooring Area  | <b>Swing Moorings</b>                                       | <b>Fixed Moorings &amp; Jetties</b>                         | <span style="color: yellow;">—</span> 11kV Underground Cable |
| <span style="color: red;">■</span> Delete Mooring Area | <span style="color: blue;">●</span> TRMP and Other Consents | <span style="color: blue;">◆</span> TRMP and Other Consents | <span style="color: orange;">—</span> Wastewater Pipe        |
| <span style="color: pink;">■</span> Casual Anchoring   | <span style="color: red;">●</span> Not Consented Or Expired | <span style="color: red;">◆</span> Not Consented Or Expired | <span style="color: blue;">—</span> Water Pipe               |
|  |   |   | <span style="color: blue;">—</span> Mean High Water Springs  |
|  |   |   | <span style="color: yellow;">■</span> Current Mooring Area   |

Cadastral sourced from Land Information New Zealand data. Crown Copyright reserved. The information on this map is prepared for indicative use only and is not intended for definitive legal, location or formal reference purposes. | Revision: Consultation Outcome | Date Exported: 30/09/2014 | Map File Path: V:\Projects\TasmanResourceManagementPlan\_Drafts\Maps\MooringAreaReview\_ConsultationOutcomes\_20140930.mxd

## 6.10 Map 10 - Ligar Inlet

A new mooring area is proposed within the estuary and on the seaward side of the sand spit at Ligar Bay. The adjoining residential areas are Tata Beach and Ligar Bay. The larger township of Pohara is 4km south-west of the proposed mooring area. There are approximately 543 people (2014)<sup>20</sup> living in the Pohara/Tata Beach/Ligar beach area, with the population swelling considerably over the summer months. The area has developed substantially over the past 20 years as a holiday and retirement area, and with the expected development of the immediate area and Port Tarakohe, the population could increase further.<sup>21</sup>

Thirteen unauthorised moorings are located within the mooring area with a further six swing and a number of fixed moorings and jetties located in the immediate vicinity. The proposed mooring area is accessible via the road reserve and beach. The area dries out at low tide with restricted access to the proposed mooring area.



<sup>20</sup> Tasman District Council Growth Model - 2014 Review.

<sup>21</sup> Pers. Comm G. Cooper, 7/11/14

Port Tarakohe is located 2km south west of the proposed mooring area and contains 20 all tide moorings, currently there is a wait list for moorings. The Port also contains 41 marina berths and 20 pile berths that at the time of writing had some spare capacity. A recent review of the commercial operations within the Port lead to increased fees and the effect was for a number of existing boat owners to vacate their berths and either leave the port entirely or to relocate to the lower fee moorings within the Port. This has led to a shortage of moorings within the Port and a surplus of marina berths<sup>22</sup>. The Port considers that there is no spare capacity to develop additional swing moorings within the Port and it is anticipated that within the next 5 years the number of moorings available within the Port will double when the Port moves to a more efficient mooring system e.g. fore and aft.



*Photo 15: Ligar Inlet (Nov 2014)*

It is estimated that six moorings could be established within the proposed mooring area at Ligar Bay. Should all existing mooring holders seek mooring space then there would be a shortfall of seven moorings. There were no boats moored/anchored at the time of the site visit. There were a number of dinghies beached on the sand spit. Future demand for moorings may be met by the provision of additional moorings within the Port. However, this opportunity will only be taken up by those boat owners with sufficient means and desire to pay the higher Port charges.

## **6.11 Map 11 - Milnthorpe**

A new mooring area is proposed near the wharf at Milnthorpe. Currently three unauthorised moorings are located in the proposed mooring area with a consented fixed mooring located at the edge of the proposed area. Access to the area is provided from the adjoining road and wharf. The feedback from consultation suggests that parts of the area are stony and sloping and that there may be limitations on the location, type of boat and mooring system used. Both moorings adjoining the proposed area use a four point mooring system to hold the boats. It is estimated that a maximum of five moorings could be provided in this area.

---

<sup>22</sup> Pers Comm G. Cooper, 7/11/14



30 September 2014



- |  |  |  |  |  |
|--|--|--|--|--|
| <span style="display:inline-block; width:15px; height:15px; background-color:green; border:1px solid black;"></span> Add Mooring Area  | <b>Swing Moorings</b>  | <span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black; border-radius:50%;"></span> TRMP and Other Consents | <b>Fixed Moorings &amp; Jetties</b>  | <span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> 11kV Underground Cable |
| <span style="display:inline-block; width:15px; height:15px; background-color:red; border:1px solid black;"></span> Delete Mooring Area | <span style="display:inline-block; width:15px; height:15px; background-color:red; border:1px solid black; border-radius:50%;"></span> Not Consented Or Expired | <span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black; border-radius:50%;"></span> TRMP and Other Consents | <span style="display:inline-block; width:15px; height:15px; background-color:red; border:1px solid black; border-radius:50%;"></span> Not Consented Or Expired | <span style="display:inline-block; width:15px; height:15px; background-color:orange; border:1px solid black;"></span> Wastewater Pipe        |
| <span style="display:inline-block; width:15px; height:15px; background-color:purple; border:1px solid black;"></span> Casual Anchoring |  |  |  | <span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black;"></span> Water Pipe               |
|  |  |  |  | <span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black;"></span> Mean High Water Springs  |
|  |  |  |  | <span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> Current Mooring Area   |

Cadastral sourced from Land Information New Zealand data. Crown Copyright reserved. The information on this map is prepared for indicative use only and is not intended for definitive legal, location or formal reference purposes. | Revision: Consultation Outcome | Date Exported: 30/09/2014 | Map File Path: V:\Projects\TasmanResourceManagementPlan\_Drafts\Maps\MooringAreaReview\_ConsultationOutcomes\_20140930.mxd

The consented moorings and boats in Milnthorpe appear to be owned by locals and residents. There have been few applications or enquires for moorings in the area with two of the three applications formalising historic moorings. At the time of the site visit there were three boats moored/anchored in the area. The Milnthorpe settlement is almost fully developed and it is anticipated that very little additional demand will occur in the immediate future.





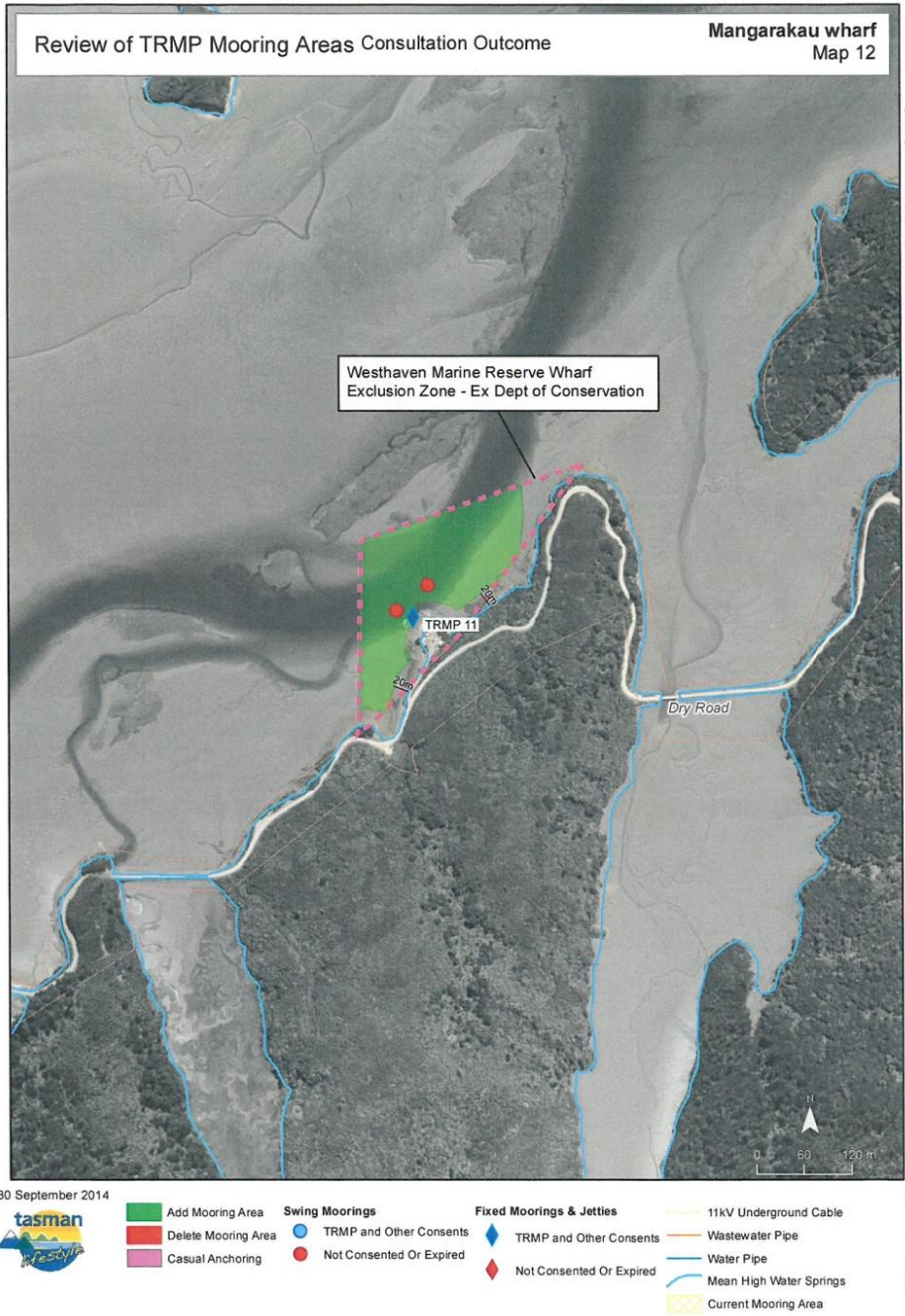
*Photo 16: Milnthorpe (Nov 2014)*

## **6.12 Map 12 – Mangarakau Wharf**

The proposed mooring area adjoins the Mangarakau Wharf (with a 20 m setback), the location and size is defined by the Westhaven Marine Reserve and the 20 m setback from Mean High Water Springs. The land adjoining the wharf is part of the North-West Nelson Conservation Park. Access to the wider inlet is provided by the boat ramp at Mangarakau and near the Kaihoka Road turn-off. The population of the wider Westhaven area is low with a few scattered farms and holiday homes to the SW and NW of the proposed area. There are currently two moorings located within the proposed area which are owned and by local fisherman. These moorings have been at this location for over 30 years and are regularly used and maintained. The feedback from consultation identifies this area is the only “safe haven” between Golden Bay and Westport; deep water and most sheltered from all winds.



*Photo 17: Mangarakau Wharf (Nov 2014)*



It is estimated that a maximum of eight moorings could be established within the proposed area. It is thought likely that demand will remain low due to the remoteness of the area, however, demand may increase with time.

## 7. Recreational Use and Navigational Safety

### Assessment for each Mooring Area

#### 7.1 Map 1 - Mapua

Mapua is a small settlement about 19 km from the main township of Richmond. Mapua has a thriving wharf and commercial area and is a popular recreational destination, particularly during the summer months. Once a busy coastal freight wharf during the orchard heyday, Mapua Wharf now contains a restaurant, bar, café and arts and crafts precinct.



*Photo 18: Mapua (Nov 2014)*

The area is popular with recreational boaties and is often visited as a day trip from Nelson or Motueka. The area has historically been used for marine activities and consists of a large mooring area, wharf, boat ramp and floating pontoon. A ferry operates between Mapua and the neighboring Rabbit Island providing a link for cyclists on the Great Taste cycle way. The Mapua camping ground is popular and particularly busy during the summer months and campers are encouraged to use the boat ramp and wharf facilities during their stay.



*Photos 19: Mapua (Nov 2014)*

The wharf provides berthage with space for a number of visiting boats to moor alongside. The size of boats entering the Mapua estuary is limited because of the depth of water and navigational space within the channel and estuary. The New Zealand Cruising Guide<sup>23</sup> recommends that cruising boats will find adequate depths of water as far as the wharf. The Guide also advises that the sandbar at the entrance to the estuary shifts and can be dangerous to cross at certain times of the day and conditions.

Adjoining the proposed mooring areas are two recreation reserves. The Mapua Waterfront Reserve and the Grossi Point Reserve which are used for passive recreation e.g. walking, picnicking, swimming, fishing, bird-watching, dog walking and boat launching. Broader recreational use of the Waimea Inlet includes shellfish collection, duck shooting, whitebating, fishing, and walking<sup>24</sup>.

The proposed mooring area adjoining the wharf is located in an established and historic mooring area and the scale and intensity of moorings is not expected to change significantly from traditional use. The newer area at Grossi point has also been used for moorings for a number of years and moorings in this area are an established use.

To accommodate other recreational users the proposed mooring areas have been set back 20 m from the foreshore and wharfage structures and three access ways are included.

The extension of the existing mooring areas is likely to have a positive effect on the recreational use of the area, providing additional safe locations for boat storage while leaving sufficient space for other recreational users moving through the area. Moorings are anticipated in the area and an extension of the mooring area is not expected to significantly affect other recreational users.

The locations of the proposed mooring areas have been reviewed by the Harbourmaster and they are considered appropriate in terms of navigation safety. The Harbourmaster considered there is ample room within the channel for public use for the bulk of the tide cycle and navigation through the Glossi Point access area is possible at low tide.

## 7.2 Map 2 - Motueka 1

A small commercial port and marina adjoins the proposed mooring area. They form the largest hub of marine activity within the District. The main wharf is owned and operated by Talleys Group Ltd and is used for commercial purposes (restricted access) There are also three separate marinas, one formed boat ramp and two informal boat ramps, owned and operated by the Motueka Power Boat Club, Motueka Yacht and Cruising Club and Motueka Peninsula Marine Society. There are approximately 90 berths within the three marinas which are used by a mix of commercial and recreational boats.



Photos 20: Motueka



There is also an adjoining hardstand area which is used for boat storage and maintenance.

<sup>23</sup> Murray, K. (2013) New Zealand Cruising Guide- Central Area. Stevens Publications. Wellington, New Zealand

<sup>24</sup> Robertson, B. & Stevens, L. (2012) Tasman Coast Waimea Inlet to Kahurangi Point: Habitat Mapping, Ecological Risk Assessment, and Monitoring recommendations. Wriggle Limited, Nelson



*Photos 21: Motueka (Nov 2014)*

Berths and other services are provided for visiting boats. Casual users can access the boat ramps for the launching and retrieval of recreational boats. During the site visit three recreational boats were launched or retrieved from the main boat ramp, with the boat owners stating that they had been fishing. It appears that some of the boats in the marina are used as live aboard accommodation. There was little passive recreational use of the area noted, however it is anticipated that this would occur as wharf areas tend to attract people. Other recreational use of the broader Moutere Inlet includes shellfish collecting, swimming, whitebaiting, fishing, walking and scientific appeal.

The New Zealand Cruising Guide <sup>25</sup> does not specifically mention this area but shows the proposed area as “dries”. LINZ Nautical Chart 6144 does not show this area as an anchorage. Concerns have been expressed that the bar entrance is getting increasingly shallow and dangerous for unskilled and inexperienced boaties and there is increasing pressure to dredge the channel to enable greater use of the Port<sup>26</sup>. There is also interest from the community and port users to further develop the marina facilities enabling greater commercial and recreational use of the Port<sup>27</sup>. The Harbourmaster is aware of the concerns raised regarding the bar entrance but does not have any specific concerns regarding the location of the proposed mooring area.



*Photo 22: Proposed Mooring Area*

The area proposed for moorings is an area already identified within the Plan for moorings and there are a number of boats moored within this area. The area has been used for moorings for a number of decades and the presence of moorings in this area is anticipated. The area identified for moorings in the draft plan change is significantly smaller than currently identified in the Plan.

It is considered that the proposed mooring area will not affect existing recreational use and overall will have a positive effect, providing a safe location for boat storage.

### **7.3 Map 3 - Motueka 2**

<sup>25</sup> Murray, K. (2013) New Zealand Cruising Guide- Central Area. Stevens Publications. Wellington, New Zealand

<sup>26</sup> <http://www.stuff.co.nz/nelson-mail/news/4979054/Port-users-channel-should-be-dredged>

<sup>27</sup> <http://www.motuekaonline.org.nz/news/stories11/151011s1.html>

The proposed area adjoins the Trewavas Street Foreshore Reserve which is a long narrow reserve that lies between the residential sections on Trewavas Street and the foreshore of Tasman Bay. The main access to the reserve is from Old Wharf Road or from North Street. The reserve is primarily developed for walking, swimming, beach access, picnicking and viewing wildlife. There is a popular outdoor swimming bath located at the end of the reserve. The track along the reserve is largely located on top of the dune system between the adjoining residential houses and the beach. The track is relatively sheltered and for much of the track sea views are blocked by vegetation. There are numerous tracks and steps leading down to the beach from the reserve and many seats arranged on the foreshore to provide coastal views. At the time the reserve was visited November 2014 the tide was partway out and the beach was broad and easy to walk on. Four rental motor homes were parked in the car park by the swimming baths and there appeared to be a mix of both tourist and locals using the reserve. Use of the area at that time (mid week/morning) was not high.



*Photos 23: Motueka (Nov 2014)*

There were a number of dinghies/kayaks/small boats stored on the dune and along the foreshore.



*Photos 24: Motueka (Nov 2014)*

There were also a number of larger craft moored within the proposed area.



*Photo 25: Motueka (Nov 2014)*

Feedback from consultation generally supports the proposed mooring area with existing boats considered not to be causing a problem, with one respondent seeing it as practical to moor a boat near the house. The Motueka Yacht and Cruising Club supported the proposed mooring area (at a reduced size and low density) and believe the amendments reflected the use of the estuary by small boats over many decades. However, other respondents raised concerns that the proposed mooring area could result in a large number of boats which could restrict the use of the area by swimmers, kayakers and dingy sailors. Concerns were also raised by respondents regarding the sensitive environment of the estuary and abandoned/ derelict boats. Following consideration of the feedback by Council the proposed mooring area was significantly reduced in size.

The New Zealand Cruising Guide<sup>28</sup> advises that almost all of the inlet dries at low water and shows the area on the map as “dries”. LINZ Nautical Chart 6144 does not show this area as a safe anchorage. The Harbourmaster has no navigation safety concerns with the proposed mooring area.

Following the reduction from the original proposed area, it is considered that the proposed mooring area will not significantly affect recreational use in the area and will support recreational use by providing additional boat storage. Residual concerns regarding the number of boats within the area and the impact they might have can be controlled by limiting the number of mooring licenses issued or imposing a maximum density, if needed. The Harbourmaster also has powers to dispose of derelict boats.

#### **7.4 Map 4 - Tapu Bay**

The proposed mooring area adjoins the Tapu Bay reserve in the settlement of Tapu Bay. The reserve comprises a grassed area beside the beach with picnic tables and rubbish containers. The main access to the reserve is down a steep access from Tapu Place. The reserve provides vehicle access to the foreshore and the main use of the reserve is for boat launching, and informal recreation.



*Photo 26: Tapu Bay Reserve (Nov 2014)*

<sup>28</sup> Murray, K. (2013) New Zealand Cruising Guide- Central Area. Stevens Publications. Wellington, New Zealand



*Photo 27: Tapu Bay (Nov 2014)*

The Council is currently working with adjoining landowners to restore the reserve. Reserves staff have no concerns regarding the effects of the proposed mooring area on recreational use of the reserve. Tapu Bay adjoins Stephens Bay and Stephens Bay appears to be the favored location for recreation use.

The New Zealand Cruising Guide<sup>29</sup> does not discuss Tapu Bay other than to say that Anawera Point separating Tapu and Stephens Bay has an outlying reef and should be given a wide berth. LINZ Nautical Chart 6144 does not show this area as an anchorage. The Harbormaster has not raised any navigational or safety concerns with the proposed area.



*Photo 28: Tapu Bay (Nov 2014)*

It is considered that the proposed mooring area will not affect existing recreational use of the area and overall will have a positive effect, providing a safe location for boat storage.

## **7.5 Map 5 - Stephens Bay**

Stephens Bay and the adjoining foreshore reserve is a popular location for both passive and active marine based recreation (boating, swimming, walking, fishing and shellfish gathering) particularly during the summer months. A few commercial tourist operators operate out of the Bay with additional operators using the boat ramp when adverse weather and tidal conditions affect their normal sites.

<sup>29</sup> Murray, K. (2013) New Zealand Cruising Guide- Central Area. Stevens Publications. Wellington, New Zealand





*Photo 29: Stephens Bay - Proposed Mooring Area (Jan 2014)*

There is a recreation reserve adjoining the esplanade reserve which contains a picnic/BBQ area and toilet facilities. The reserves are used year around, particularly by Stephens and Tapu Bay residents.

The proposed mooring area is located approximately 100 m off shore from mean high water springs and incorporates 10 existing moorings. Up to 3 new moorings could be located seaward of the existing area.

The New Zealand Cruising Guide<sup>30</sup> states that in addition to the outlying reef at Anawera Point there are a number of rocks and other underwater obstacles in Stephens Bay which should only be approached with great caution. LINZ Nautical Chart 6144 does not show this area as a safe anchorage. The Harbourmaster has not raised any navigational and safety concerns (see below).

Historically, the use of the Bay at peak times of year has caused conflict between locals and other users, particularly with regard to parking. Aerial photos taken during the Christmas period show numerous cars, boat trailers, boats, kayaks and dinghies in and around the esplanade reserve.



*Photo 30: Explore Tasman (taken from internet 12.1.15)*

<sup>30</sup> Murray, K. (2013) New Zealand Cruising Guide- Central Area. Stevens Publications. Wellington, New Zealand

Changes to the reserve, roading and parking layout have since improved the situation<sup>31</sup>. However, concern still exists and several respondents to the consultation document raised concerns about: the popularity of the bay; capacity to cope with additional use; pressure on/for new onshore facilities; and safety and conflicting uses and values. Some felt the bay was too busy and felt unsafe. The feeling among some was that there is no room for additional boats, particularly for more commercial activity.

There appears to be two potential impacts from the proposed moorings area. The first is the increasing complexity and level of use in the bay and whether or not the proposed moorings area will adversely affect other users. The second issue is potential adverse effects arising from the use of the bay by commercial operations.

All existing moorings in the proposed mooring area are consented and have the right to continue occupying the space until expiry of consent (between 2015 and 2025). The potential addition of 3 moorings (seaward) is thought to have a lesser impact on recreational use than the current moorings which are located within 100m of the foreshore. From the feedback there was a comment that only three to five of the moorings were regularly used, if the use of the existing moorings were to increase as well as additional moorings then the complexity and level of use of the bay may also increase, creating further conflicts among recreational users. However, from the site visits the majority of congestion appeared to occur between the beach and the mooring area, with very little occurring within the mooring area other than people passing through. There are no recorded complaints regarding the moorings in Stephens Bay.

If activity increases in the bay to the extent that there is a significant conflict between recreational uses and the moorings then, the Harbourmaster has the capacity to relocate moorings (on expiry of consent or license) or reduce the number of moorings to mitigate navigation and safety concerns. The Harbourmaster also has powers to prohibit and reserve areas for particular uses e.g. swimming, water skiing, should conflicting recreational use become a navigational safety matter.

Council has very little control over who uses the road, reserve or boat ramp to access the coastal area and subsequently it is difficult to limit commercial operators within Stephens Bay.



*Photo 31: Stephens Bay - Mooring Area (Jan 2015)*

With regard to concerns raised about commercial use of the moorings, Reserve staff<sup>32</sup> consider that the existing onshore facilities (except parking) are sufficient to meet demand if more moorings are established. The use of the parking area by commercial vehicles and trailers, for extended periods during the day(s) has at times caused a shortage of parking for other recreational users. Concerns were expressed by Reserves staff that if use of the moorings by commercial operators increased and demand for parking also increased, then it would affect other recreational uses.

---

<sup>31</sup> Pers. Com 9 Jan 2015 Steve Richards, Council reserves officer

<sup>32</sup> Pers. Com 9 Jan 2015 Steve Richards

The launching of commercial boats and trailer parking on legal road cannot be addressed through the draft plan change as parking on the road is a permitted activity. The provisions in the draft plan change cannot also address the current commercial use of the moorings because they are authorised by resource consent, up until 2025. Long term the use of the moorings by commercial operators could be controlled through the Plan; however, it may encourage commercial operators to trailer in large boats instead which could worsen the identified parking problem.

The Harbormaster has not raised any navigational or safety concerns with the proposed area.

Over all, it is considered that the proposed mooring area will not significantly affect existing recreational users.

## 7.6 Map 6 - Kaiteriteri

The Kaiteriteri Recreation Reserve consists of 242 Ha of land and is a nationally important recreational and leisure destination. Residential development surrounds the reserve and there is a significant permanent resident population (789 people -2013 census<sup>33</sup>) as well as a large number of holiday homes.

Kaiteriteri Recreation Reserve is one of the most popular camping sites in the South Island and is an important gateway to the Abel Tasman National Park. In 2008 the water taxis and guided on-water tour concessionaries operating from Kaiteriteri carried over 38,000 visitors into Abel Tasman National Park and between 100,000 and 114,000 bed nights are recorded at the Kaiteriteri Recreation Reserve annually.<sup>34 35</sup>

Kaiteriteri is a high recreational use area with both commercial and private recreational activities taking place. Recreational use is a mix of passive (walking, sunbathing) and active – boating, kayaking, swimming, paddle boarding etc. In 2009 a 180 Ha mountain bike park was added to the Reserve and in 2014 the Great Taste Bike trail was extended to Kaiteriteri, increasing the number of land based recreational users.



Photo 32: Kaiteriteri (<http://www.tasman.govt.nz/tasman/settlements/kaiteriteri/kaiteriteri-photos/>)

The New Zealand Cruising Guide<sup>36</sup> describes the amenities of the Bay and suggests that launches can temporarily beach their bows on the sand and anchorage is shown on the maps within the area set aside for swimming. Anchoring is only recommended in certain winds. The Harbourmaster recommends

<sup>33</sup> [http://www.stats.govt.nz/Census/2013-census/profile-and-summary-reports/quickstats-about-a-place.aspx?request\\_value=14560&parent\\_id=14547&tabname=](http://www.stats.govt.nz/Census/2013-census/profile-and-summary-reports/quickstats-about-a-place.aspx?request_value=14560&parent_id=14547&tabname=)

<sup>34</sup> Department of Conservation (2006) Kaiteriteri Recreation Reserve Management Plan 2006, <http://www.doc.govt.nz/about-doc/policies-and-plans/conservation-management-plans/kaiteriteri-recreation-reserve-management-plan/>

<sup>35</sup> Kaiteriteri Recreation Reserve Board (2011) Draft Kaiteriteri Recreation Reserve Management Plan.

<sup>36</sup> Murray, K. (2013) New Zealand Cruising Guide- Central Area. Stevens Publications. Wellington, New Zealand

anchoring beyond the 3m contour as beached boats can be swamped. A former Harbourmaster also states the bay is not safe for anchoring with rough seas building very quickly in certain winds and areas<sup>37</sup>. LINZ Nautical Chart 6144 does not show this area as an anchorage.

The Kaiteriteri Recreation Reserve Board manages the reserve, including the foreshore, for a range of recreational opportunities primarily through the allocation of space to different users. In the 2006 Kaiteriteri Recreation Reserve Management Plan<sup>38</sup> the proposed mooring area partially falls within and adjoins an area identified in the Plan for mooring and anchorage use. Boat launching, swimming and waterskiing are provided for elsewhere in the Bay.

Navigation and safety matters arising from use of the water is managed under the **Draft** Navigation and Safety Bylaw (2014). The Bylaw specifies areas and times of use for particular activities. The inshore proposed mooring area is partially identified as an anchoring prohibited area and boat access, waterskiing and swimming are specifically provided for in other areas.

The Harbourmaster has no navigational and safety issues with the areas proposed for mooring, and the proposed mooring areas are consistent with the recreational uses of the area.



*Photo 33: Kaiteriteri (Jan 2015)*

From the feedback there appeared to be little tension between the recreational use and the demand from commercial operators for more moorings. One person commented that it appeared that pressure was being put on Council to accommodate the commercial sector with preference over the general public which was at odds with the purpose of Kaiteriteri Recreation Reserve. The issue was more with the impact of commercial operations than the moorings them self. There were a number of suggestions as to how the moorings could be arranged to enable greater casual anchoring in the Bay. It appears that the demand for moorings within the Bay by commercial operators has reached the point that the response to the unmet demand is in the form of illegal moorings and semi-permanent anchoring may now be impacting on casual anchoring opportunities. Through the proposed mooring areas there is the potential to meet the needs of the commercial operators as well as providing more space for casual mooring through more efficient use of the mooring area.

<sup>37</sup> Tom Rowling- Feed back on the discussion document

<sup>38</sup> Department of Conservation (2006) Kaiteriteri Recreation Reserve Management Plan 2006, <http://www.doc.govt.nz/about-doc/policies-and-plans/conservation-management-plans/kaiteriteri-recreation-reserve-management-plan/>



*Photo 34: Kaiteriteri (Jan 2015)*

## **7.7 Map 7 - Otuwhero - Marahau**

Marahau is a small settlement which is located near the entrance to the Abel Tasman National Park. The number of people travelling through and staying in Marahau swells during the summer months with 80% of the National Park use occurring between November to April each year. A large number of commercial operators access the Abel Tasman National Park from Marahau.

Most commercial operators and private individuals use a centrally located concrete boat ramp with a defined corridor for launching. At the peak of the season over 100 vehicle movements per day (2008) have been recorded at the boat ramp<sup>39</sup>.



*Photos 35: Marahau (Nov 2014)*

Marahau is the most popular launching site for kayakers using the Park and the majority of guided kayak tours leave from Marahau. A number of water taxis also operate from Marahau, providing a pick up and drop off service to trampers in the Park. Other recreational uses of Otuwhero estuary include shellfish collecting, swimming, whitebaiting, fishing, boating and walking.

<sup>39</sup> Tasman District Council (2008). Resource Consent application file 080651



*Photo 36: Marahau (Nov 2014)*

The New Zealand Cruising Guide<sup>40</sup> does not recommend this area and shows the area as “dries”. LINZ Nautical Chart 6144 does not show this area as an anchorage.

The proposed mooring area is located 500m SW of the main boat ramp and is accessed along a sandbar. A car park and toilet are located at the base of the sandbar. Vehicle access is possible, but limited.

At the time of the November site visit there were 11 boats moored/ anchored around the sand spit, which is a decrease on 15-16 boats normally seen on aerial photos. One derelict boat had been removed earlier in the year with a further derelict boat due for removal. Local feedback suggested that a number of long term boats had recently relocated elsewhere. Feedback from respondents suggested the area traditionally is used by local, small, non-commercial craft and provides “low cost, self serviced moorings for people of small means to own and enjoy boats”.



*Photo 37: Marahau (Nov 2014)*

A number of dinghies, kayaks, bikes and other recreational equipment were stored on the foreshore. At the end of the spit is a boat launching area.

---

<sup>40</sup> Murray, K. (2013) New Zealand Cruising Guide- Central Area. Stevens Publications. Wellington, New Zealand



*Photo 38: Marahau - boat launching area (Nov 2014)*

One respondent identified that the two spits were increasingly used for walkers, bird watches, kayakers, paddle boarders, swimmers, windsurfers and fishers and opposed the proposed mooring area because it was a prime area for recreation. Another respondent similarly suggested that the inlet had become a major recreation area, particularly for swimming, and that the boats and mooring structures & ropes were a hazard to the public. Concern was raised regarding the congestion that occurred in the adjoining car park and loading zone from commercial and non-commercial recreational use. The feedback suggested that the proposed mooring area would lead to further congestion.



*Photo 39: Marahau (Jan 2015)*

The proposed mooring site was visited three times (during the week, mid and late afternoon and weekend) no other person was seen on the sand spit during those visits, although there was evidence of the area being used (boats, bikes and footprints). During the weekend there were a number of campervans, tourists and a commercial operator at the car park. It was considered that there were few if any impediments to recreation on the eastern side of the spit and sufficient room for walking along the western side of the spit. There were several anchor ropes on the foreshore, but in general walking access along the foreshore was not considered difficult.



*Photo 40: Marahau (Jan 2015)*

The introduction of a proposed mooring area is anticipated to reduce the number of boats moored in the area. It is anticipated that the proposed mooring area will not increase the congestion currently experienced at the car park which appears from community feedback and observation<sup>41</sup> to be largely associated with local, tourist and commercial use of the sand spit. The introduction of a mooring area may improve access along the foreshore with greater regulation of mooring systems and a reduction in the number of boats moored in the area. The reduction in the number of moorings may reduce the recreational opportunity for those previously moored in the area, however, this may be offset by the boats anchoring further offshore, which is a permitted activity.

The Harbourmaster does not have any navigation or safety concerns with the proposed mooring area.

Overall, it is considered that the proposed mooring area will not significantly affect the recreational use of the area and may positively enhance it by reducing the number of mooring and anchoring ropes along the foreshore.

## **7.8 Map 8 - Glasgow and Torrent Bays and Map 9 - Boundary Bay**

Glasgow and Torrent Bay are areas used for both mooring and casual anchoring by recreational vessels, particularly over the summer months. The New Zealand Cruising Guide<sup>42</sup> identifies the Torrent Bay area as the most popular anchorage in the Abel Tasman National Park and states that Anchorage is the most protected with three anchoring areas shown. The Guide advises that Torrent Bay has good holding and shelter from W to N winds and there is not much room to anchor. Boundary Bay is identified as having dangerous reefs extending from either side of its entrance, but sheltered within.<sup>43</sup> The LINZ Nautical Chart 6144 shows anchorages in Boundary Bay and in the Anchorage. The Department of Conservation has recorded up to 21 boats per night using Torrent Bay (1991-2)<sup>44</sup> and over 100 boats were noted by a former Harbourmaster at one New Year<sup>45</sup>.

The Abel Tasman National Park Great Walk Track passes through Torrent Bay and the beach at Torrent Bay and Anchorage are commercial access points for the track. The Department of Conservation limits commercial boat drop offs to Torrent Bay to the morning & noon. These restrictions do not effect residents (or their guests) or private pleasure craft. There is no direct access to the track from Boundary Bay and the bay is not an identified commercial tourist access point. Both areas contain private residences and holiday homes. The Abel Tasman National Park is used by a wide range of people for

---

<sup>41</sup> Site visit Jan 2015

<sup>42</sup> Murray, K. (2013) New Zealand Cruising Guide- Central Area. Stevens Publications. Wellington, New Zealand

<sup>43</sup> Murray, K. (2013) New Zealand Cruising Guide- Central Area. Stevens Publications. Wellington, New Zealand

<sup>44</sup> Department of Conservation (1993). Internationally and nationally important coastal areas from Kahurangi Point to Waimea Inlet, Nelson, New Zealand: recommendations for protection. Occasional Publication 14. Pg 90

<sup>45</sup> Per Com from A. Swanson regarding a comment by Graham Caradus.



tramping, swimming, sunbathing, boating and pic-nicking. Many people access the Abel Tasman coast from the sea, with over 90% of the visitors to the national park using the coastal environment.<sup>46</sup>

There have been no complaints lodged with Council with respect to the placement and use of the existing moorings and the use is understood to be infrequent, usually of short duration and seasonal. The feedback also states that the mooring location causes few problems during the busy Christmas period. Recreational users of the area are accustomed to the placement and use of the moorings and anchor and navigate accordingly. Comment was made through the feedback that further moorings would over-intensify the use of the available water and restrict water taxi access. It is proposed that only one additional mooring in Torrent and Boundary Bay be established and at that density the Harbourmaster is not concerned the mooring area will restrict water taxi access. The Harbourmaster has not identified any navigational or safety concerns with the proposed mooring area location.

It is considered that the proposed mooring area will not affect existing recreational use of the area and overall will have a positive effect, providing a safe location for boat storage.

## 7.9 Map 10 - Ligar Inlet

The proposed mooring area is on the western side of the Ligar Bay sand spit and is located at the end of Ligar Bay beach. There is off road parking and access to the area from the adjoining Ligar Bay foreshore reserve. Access along the spit is not well formed and at high tide access along the spit beach is restricted. At low tide the area dries. There are few houses in the vicinity of the mooring area with most residential dwellings located further south & north in Ligar and Tata Bay.

The New Zealand Cruising Guide<sup>47</sup> describes the area as pleasant in calm weather, but the beach becomes most difficult in W to NW winds when a strong swell affects it. No anchorage areas are identified. LINZ Nautical Chart 6144 does not show this area as a safe anchorage. The Harbourmaster has not identified any navigational or safety issues.

Tourist websites identify Ligar Bay as a good picnic spot with a safe, sandy, flat and beautiful beach with little motorised sporting activities, fishing and kayaking is popular. The neighbouring Tata Beach has a boat ramp which is popular with water skiers and jet skiers. Port Tarkohe, 2km south west of the proposed mooring area, contains a marina, moorings, the local boat club and other amenities and maintenance facilities. Port Tarkohe is the main location for marine activity.

Robertson, B. & Stevens identify the wider area has having high use, and is valued for its aesthetic appeal, biodiversity, shell fish collection, swimming, whitebaiting, boating, walking, cycling and scientific appeal<sup>48</sup>.



*Photo 41: Ligar Bay (Nov 2014)*

<sup>46</sup> Tasman District Council & Department of Conservation (2012) Abel Tasman Foreshore Scenic Reserve Management Plan. Nelson, New Zealand

<sup>47</sup> Murray, K. (2013) New Zealand Cruising Guide- Central Area. Stevens Publications. Wellington, New Zealand

<sup>48</sup> Robertson, B. & Stevens, L. (2012) Tasman Coast Waimea Inlet to Kahurangi Point: Habitat Mapping, Ecological Risk Assessment, and Monitoring recommendations. Wriggle Limited, Nelson

At the time of the site visit no boats were moored/ anchored in the proposed mooring area. Four boats were located across the channel either on pile or lean on moorings and one boat was seen anchored further into the inlet.



*Photo 42: Ligar Inlet (Nov 2014)*

It is considered that the proposed mooring area will not affect existing recreational use of the area and overall will have a positive effect, providing a safe, low cost location for boat storage.

## **7.10 Map 11 - Milnthorpe**

Milnthorpe is a small residential area consisting of about 20 houses located in the Parapara Inlet. Two consented moorings are located north of the proposed mooring area and are owned by residents. A third consented fixed mooring is located adjoining the proposed mooring area. Access to the proposed mooring area is through the Milnthorpe Quay reserve. The reserve contains a boat ramp and adjoins an old wharf which is derelict.



*Photos 43: Milnthorpe*



The New Zealand Cruising Guide<sup>49</sup> does not mention the proposed mooring area beyond stating that it is possible to enter the river at High Water and there is a wharf. LINZ Nautical Chart 6144 does not show this area as an anchorage. During the site visit three boats were moored in the area and a recreational fishing boat departed from the boat ramp. From the feedback it appears the area is also used by kayakers and small boats, particularly catamarans. Other comments were that the proposed mooring area was suitable because it was in an area not used by other boats.

Concern was raised in the feedback regarding the need to keep the mooring area set back from the channel and to keep the channel clear for navigation and particularly for recreational users such as learner sailors. Issues were raised regarding the effects of an existing 4 point mooring which was thought to hamper other craft turning in the area. Feedback also suggested that a 40m set back from

<sup>49</sup> Murray, K. (2013) New Zealand Cruising Guide- Central Area. Stevens Publications. Wellington, New Zealand

shore should be used. The Harbourmaster has not identified any navigational safety issues with the proposed mooring area.



*Photo 44: Milnthorpe (Nov 2014)*

There are numerous tracks criss-crossing the hillside above the settlement in the Milnthorpe Park Scenic Reserve, with some tracks leading to the beach<sup>50</sup>. There is also a coastal walkway developed along the Milnthorpe Quay Reserve<sup>51</sup>. The Department of Conservation suggests that the estuary and coast provide good swimming. Robertson & Stevens<sup>52</sup> states the area is valued for shellfish collection, swimming, whitebaiting, fishing, boating, and walking.

It is considered that the proposed mooring area will not significantly affect existing recreational use of the area and overall will have a positive effect, providing a safe location for boat storage.

## **7.11 Map12 – Mangarakau Wharf**



*Photo 45: Mangarakau Wharf*

The proposed mooring area is located at the remote Mangarakau Wharf, in the Westhaven Inlet and adjoins one of the two boat ramps in the immediate area. The area is dominated by an old derelict wharf and reclamation which is predominantly used as a storage area for commercial fishing.

<sup>50</sup> <http://www.goldenbaynz.co.nz/walks/milnthorpe-park-scenic-reserve/>

<sup>51</sup> Tasman District Council (2003) Golden Bay Ward Reserves Management Plan-Milnthorpe Quay Reserve.

<sup>52</sup> Robertson, B. & Stevens, L. (2012) Tasman Coast Waimea Inlet to Kahurangi Point: Habitat Mapping, Ecological Risk Assessment, and Monitoring recommendations. Wriggle Limited, Nelson



*Photo 46: Mangarakau (Nov 2014)*

There were no boats in the mooring area at the time of the site visit, however, through the feedback it appears the area is regularly used by commercial fishermen for mooring.

The area is surrounded by the Westhaven (Te Tai Tapu) Marine Reserve which also adjoins the Westhaven (Whanganui Inlet) Wildlife Management Reserve. Robertson & Stevens identify the area as having high recreational values (boating, walking) with rich biodiversity (fishing, whitebaiting & duck shooting)<sup>53</sup>. The area is of particular cultural significance to Maori. There are several holiday homes and accommodation providers located around the inlet. Feedback from consultation suggests that the area is becoming increasingly popular for recreational use.

The New Zealand Cruising Guide<sup>54</sup> and LINZ Nautical Chart 61 do not identify anchorages in this area. The area is identified by Council as a remote location for marine search and rescue. The Harbourmaster has not identified any navigational or safety issues.

The proposed mooring area is the only area in the inlet not subject to a reservation and subsequently is the only area where moorings can be established. The impact of the mooring area on the recreational values is unknown, however given the remoteness of the area the impact is thought to be minimal and the mooring area may support recreational use by providing a safe location for boat storage and a secure location for the commercial fishing boats used in local search and rescue to moor.

## 8. Conclusion

Tasman District Council is proposing to introduce 12 mooring areas within the district. Within these mooring areas members of the public, who hold a mooring license issued by the Harbourmaster, will be able to moor their boats as a permitted activity. The New Zealand public cherish the coastal marine area and before any space within the coastal marine area is allocated an assessment needs to be undertaken regarding the need for the space and the impacts the mooring area will have on other users.

An assessment was undertaken regarding the need for moorings within the district and it was found that there was demand, and there would continue to be demand in the future. It was also identified that some of the proposed areas would be insufficient to meet existing demand and a reconsideration of the area proposed was suggested.

An assessment was also undertaken regarding the impacts of the proposed mooring areas on recreational use of the area, including effects on navigation and safety. There were no issues identified and it was generally considered that the proposed mooring areas would positively affect use of the coastal marine area by providing a safe location for boat storage.

<sup>53</sup> Robertson, B. & Stevens, L. (2012) Tasman Coast Waimea Inlet to Kahurangi Point: Habitat Mapping, Ecological Risk Assessment, and Monitoring recommendations. Wriggle Limited, Nelson

<sup>54</sup> Murray, K. (2013) New Zealand Cruising Guide- Central Area. Stevens Publications. Wellington, New Zealand

ASSESSMENT OF SHOREBIRD USE OF  
PROPOSED BOAT MOORING SITES AT  
OTUWHEREO/MARAHAU AND MOTUEKA  
Report prepared for Tasman District Council



**David S. Melville**

April 2015

## **Executive summary**

The potential impacts on shorebirds from proposed mooring areas at Otuwhero Spit, Marahau and at Motueka are assessed. Both areas are currently used for mooring. It is considered that there will no significant adverse effects on shorebirds from the development of the mooring areas as proposed.

## **Introduction**

Tasman District Council is undertaking a review of options for boat mooring management in coastal areas of Tasman district. Council released a *Review of mooring management: discussion document* for public consultation (6 January – 28 March 2014). Among feedback and submissions received some expressed concerns regarding potential ecological impacts including adverse impacts on birds, in particular with reference to the 'Motueka 2' site.

A desk top review of potential ecological impacts has been prepared by Davidson (2015), who also identified potential bird impacts at Otuwhero/Marahau.

Tasman District Council requested me to prepare a report on potential impacts on birds at the Motueka 2 and Otuwhero/Marahau sites should the proposed new mooring proposals be implemented.

Both of the areas of interest are currently used for mooring. There are about 12 existing moorings within the Otuwhero Spit site, and 17 at Motueka. It is proposed that existing mooring structures, which come in a wide variety of designs and materials, be replaced by Council-approved designs (Tasman District Council 2013).

## **Field survey**

Field visits were made to Otuwhero/Marahau on 5 March 2015, and to Motueka 2 on 27 February and 10 March 2015.

The field visits were made outside the shorebird breeding season but at a time when the arctic-breeding species (Bar-tailed Godwit, Red Knot and Turnstone) were completing fattening prior to migrating to the Yellow Sea, and when South Island Pied Oystercatchers had moved to the coast from inland breeding areas, thus at the time of year when it may be expected that benthic prey stocks are under greatest pressure.

At Otuwhero observations were made on 5 March 2015 on a rising tide, over high tide and on the falling tide. Predicted tides for Nelson were:

High 10.50h, 4.0m      Low 16.32h, 0.9m

At Motueka, observations on 27 February 2015 were by walking out on to the tidal flats off Motueka Quay/Trewavas Street and were done at low tide and on the rising tide. Predicted tide heights for Nelson were:

Low 11.31h, 1.4m      High 17.31h, 3.3m

On 10 March 2015 observations were made at high tide and on the falling tide from Motueka Sandspit and Motueka Quay/Trewavas Street. Predicted tides for Nelson were:

High 13.14 h, 4.0m      Low 19.01h, 0.7m

### **Otuwhero-Marahau**

The proposed mooring area is shown in Fig. 1. The site covers about 18,640 m<sup>2</sup>, and will have space for 6-8 boats.

Davidson (2015) noted that 'Variable Oystercatcher and dotterel [presumably Banded Dotterel] may breed in this area and both are vulnerable to disturbance', and Robertson and Stevens (2012) also recorded Variable Oystercatcher and Banded Dotterel breeding in the Marahau area. The spit is potentially suitable as a nesting site for both species.

The spit is largely covered with marram grass, with other exotics such as lupin, ice plant, gorse and willow present. Part of the spit has also been planted with native shrubs such as hebe, marsh ribbonwood and ngaio, as well as flax and toitoi (Fig. 2). There are, however, some areas with little vegetation that could provide potential breeding habitat for both Variable Oystercatcher and Banded Dotterel (Fig. 3).

The field visit was outside the breeding season of both species, however two pairs of Variable Oystercatchers were present on the spit and their behaviour suggested that they held territories there and so could be expected to have attempted nesting. However if nesting had been attempted both pairs had apparently failed – fledged young would have been expected still be accompanying adults at this time of year. Birds were seen foraging for sand scarab beetle larvae in the dune area (Fig. 4)

The base of the spit (northern end) is currently subject to extensive disturbance from kayak parties launching to go to the Abel Tasman National Park, (Fig.5) novice paddle boarders in the inlet to the west of the spit (Fig. 6), and pedestrians, who may also be accompanied by dogs (Fig.7), and who also walk along the beaches (Fig. 8) and the track that runs down the centre of the spit. The area is also susceptible to mammalian predators.

It is unlikely that any shorebirds would be successful breeding at this site due to the current levels of disturbance unless protective measures were put in place.

At high tide shorebirds were observed roosting at three sites in the Marahau area (Fig. 9). A sandbank some 400-500m offshore to the east of Otuwhero Spit had 222 South Island Pied Oystercatchers and 1 Variable Oystercatcher roosting (Fig. 10). Two roosts around the Marahau Stream estuary had 118 Bar-tailed Godwits, 130 South Island Pied Oystercatchers, 29 Variable

Oystercatchers, 47 Banded Dotterels, 13 Pied Stilts, 1 Wrybill and 4 Spur-winged Plovers. As the tide dropped the oystercatchers at the sandbank walked further offshore and began foraging once the tidal flats were exposed (Fig. 11, 12). The shorebirds at the Marahau Stream area also began foraging on the falling tide, most foraged in the northern section of Marahau beach but some of the Bar-tailed Godwits moved south to forage with the oystercatchers off the mouth of Otuwhero Inlet (including one colour-banded bird seen roosting at Marahau Stream).

The intertidal area inside the spit in Otuwhero Inlet is currently used for mooring by a variety of vessels (Fig. 13). On 5 March throughout the whole period of observation the only bird seen in the vicinity of the proposed mooring site was a single White-faced Heron that was foraging during the period of ebbing tide. Cockle densities appeared to be quite high around the moorings but it is likely that oystercatchers find the area unattractive due to the rather enclosed nature of this corner of the bay; furthermore, the front beach appeared to provide good foraging such that the birds would not need to exploit the mooring area.

## **Motueka**

There are currently some 30 moorings along the beach off Motueka Quay and Trewavas Street, although many appear to be unused. It is proposed to reduce the area of moorings. The original proposal for the Motueka 2 Mooring Area covered 13,5068 m<sup>2</sup> whereas the revised proposal covers 3,4475 m<sup>2</sup> and will have space for some 20 boats (Fig. 14). The total intertidal area between Motueka Quay/Trewavas Street and Motueka Sandspit is estimated to be about 168 ha, thus the current proposed mooring area covers some 2.05% of the total intertidal.

Motueka Sandspit is an internationally important site for shorebirds (Schuckard and Melville 2013). During the summer both Variable Oystercatcher and Banded Dotterel nest on the sandspit, the numbers of Variable Oystercatcher being of international importance. Throughout the year shorebirds roost on the sandspit at high tide and then, as the tide ebbs, move out to the adjacent tidal flats to forage (Fig. 15).

No total counts of shorebirds at Motueka were made during the present study, however the Ornithological Society of New Zealand made a census of shorebirds roosting on Motueka Sandspit on 20 February 2015 (Table 1) (R. Schuckard pers. com.). The OSNZ data provide an indication of the number of birds likely to be present in the area on 27 February and 10 March 2015.

Table 1. Numbers of shorebirds roosting at high tide on Motueka Sandspit, 20 February 2015 – data kindly supplied by Rob Schuckard, The Ornithological Society of New Zealand.

<b>Species</b>	<b>Number</b>
South Island Pied Oystercatcher	835
Variable Oystercatcher	58
Pied Stilt	44



Banded Dotterel	167
Spur-winged Plover	1
Turnstone	270
Red Knot	200
Bar-tailed Godwit	1950
Black Stilt (hybrid)	1

The area between Motueka Quay/Trewavas Street and Motueka Sandspit is covered in soft silty material in the northern section to a depth of about 10cm (Fig. 16). However the area where boats are currently moored is generally more sandy and firm (Fig. 17), although a thin layer of silt is present in some areas, especially along the edge of the tidal channel to the East of the mooring area.

Many of the moorings were unoccupied at the time of the field visits, but 8 vessels were present on 27 February and 9 on 10 March (Fig. 18), some of which appeared to have been present for a long time judging by the amount of fouling organisms present on the hull (Fig. 19). There was a variety of mooring fixtures (Fig. 20).

There is evidence that some vessels are causing scouring of the substrate surface when they swing at mooring (Fig. 21), and this may account for the reduced amount of silt in the mooring zone, but water movements also may be responsible.

Footprints of shorebirds (Fig. 22) could be seen in soft sediment areas across the intertidal, including in close proximity to moored vessels resting on the exposed flats – in one case a Bar-tailed Godwit had walked within about 3m of a vessel resting on the exposed tidal flat (Fig. 23).

Observations of birds on the ebb tide revealed that birds started to leave the roosts about 2.5 to 3 hours after predicted high tide. South Island Pied Oystercatchers moved to the sandbank area around the Port Motueka channel while Bar-tailed Godwits moved to the silty areas inside the sandspit (Fig. 24) – the East side of which becomes exposed before the West. As the tide continued to fall the godwits spread more widely over the exposed flats, but continued to favour more silty areas.

Once the area around the existing moorings started to become exposed small numbers of South Island Pied Oystercatchers began foraging (11 at 1740h on 10 March) (Fig. 24). Numbers of oystercatchers increased (max. 40) as a shellbank close to the main channel became exposed and then Bar-tailed Godwits (max. 27) and Red Knots (max. 13) began to forage in an area of soft sediment at the edge of the channel.

At low tide birds are usually distributed close to the water's edge. Oystercatchers mostly rest (Fig. 26) before resuming foraging on the incoming tide, but godwits may continue foraging – at the time of observations godwits were in the final stages of pre-migratory fattening and therefore need to eat.

Small numbers of Turnstone, Red-billed Gull, Pied Stilt and White-faced Heron were also seen foraging in the general area of the existing moorings, usually along the tide edge, and mostly not until the soft sediments near the main channel had been exposed.

Observations in late February/early March revealed that relatively small numbers of shorebirds occurred within the existing area of moorings (Table 2), which could be related to a number of factors, singly or in combination. The area is used by walkers once the top of the beach is exposed, some of whom have dogs off leash; the comparatively sandy substrate may have less food available than elsewhere in the estuary – notably most birds came to the site once silty areas had been exposed; the presence of boats may make the area less attractive to birds – although birds were seen at times close to boats, and relatively few birds also were recorded in areas with mooring fixtures but no boats, but footprints indicated that birds were not avoiding mooring fixtures.

Table 2. Maximum number of shorebirds recorded in the general area of current moorings\*.

Species	Maximum number	% of total*
South Island Pied Oystercatcher	40	2.05
Variable Oystercatcher	5	8.6
Pied Stilt	6	13.6
Banded Dotterel	1	0.6
Turnstone	3	1.1
Red Knot	13	6.5
Bar-tailed Godwit	27	1.4

\* Generally shorebirds tend to feed along the tide edge, following the ebb and flood, and thus traverse the intertidal area. As such, the 'maximum' numbers recorded here would not have been present throughout the whole period that the intertidal area was exposed.

\*\*Number recorded in the moorings area as a percentage of birds counted at high tide roosts by the Ornithological Society of New Zealand (Table 1).

### **Potential impacts of moorings and vessels on birds**

A review of the literature resulted in no publications being found that related to impacts of vessel moorings on birds. Correspondence with researchers overseas confirmed that they were unaware of any research on this topic. It is noteworthy that studies of the effects of 'man-made structures' on waterbirds at low tide (Burton *et al.* 2002) did not consider moorings, and a study of mooring

impacts in Moreton Bay, Queensland, was restricted to seagrass damage, although it is a site of international importance for shorebirds and a designated Ramsar site (DEEDI 2011). In view of the extent of research on other aspects of the effects of development and disturbance on birds, especially shorebirds, in coastal environments it appears that moorings and associated vessels are generally not regarded as an issue of concern.

Boats at swing moorings will directly impact shorebirds by preventing access to substrate for foraging when the vessel is resting on the intertidal substrate. Boat moorings may have indirect effects by impacting on surface sediments and benthos, and by damaging areas of seagrass (Herbert *et al.* 2009, Demers *et al.* 2013). Field surveys revealed that there is no sea grass at either Otuwhero (although *Zostera* occurs on Marahau main beach) or at Motueka. There was evidence of some vessel scouring of surface sediment at Motueka, both by the anchor chains and the hull of the vessel, and this likely to have impacted benthic invertebrates.

The use of antifouling materials on vessels may also adversely affect benthos ( Environmental Protection Authority 2013) , however it is apparent that at least several of the vessels at Motueka have extensive fouling by marine organisms (Fig. 19) suggesting that the hulls have not been treated. Biofouling on boats at swing moorings may also result in risks associated with transport of marine organisms (Brine *et al.* 2013). Aspects relating to potential pollution of the marine environment and dispersal of organisms fall outwith the terms of reference for this study.

#### **Potential impacts at Otuwhero and Motueka.**

The proposed mooring sites at Otuwhero and Motueka are currently being used for boat mooring. In the case of Motueka the proposed mooring area is approximately one quarter the size of that currently in use (although not all existing moorings have boats attached to them), and will have provision for some 20 moorings. This will result in fewer moorings than currently in the area (about 30), with the moorings concentrated into a smaller area. Based on limited field observations for this study, and an extensive literature search, it appears that moorings and associated boats are unlikely to have significant effects on shorebirds in the intertidal.

Associated disturbance from people accessing boats etc. will be limited due to the small number of vessels at each site, and both sites are already subject to human disturbance – the mooring proposals are unlikely to significantly change the level of human use at either site.

#### **The New Zealand Coastal Policy statement**

The New Zealand Coastal Policy Statement 2010 includes Policy 11 Indigenous biological diversity (biodiversity), which is:

To protect indigenous biological diversity in the coastal environment:

(a) avoid adverse effects of activities on:

(i) indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists;

(ii) taxa that are listed by the International Union for the Conservation of Nature and Natural resources as threatened;

12 bird species listed as ‘threatened’ or ‘at risk’ (Robertson *et al.* 2013) have been recorded from the Marahau area and 14 species from the Motueka area (Appendix 1).

The proposed arrangements for moorings at both Otuwhero and Motueka will not result in adverse effects on any threatened or at risk bird species.

## **Uncertainties**

This study was limited to the period February/March and it is possible that shorebird behaviour and distribution is different at other times of year. However I have been visiting the Motueka area for over 15 years and it is my impression that the observations reported here are not significantly different to what I would expect at other times of year. The late summer period is when the largest numbers of shorebirds are present; the arctic-breeding birds are preparing to migrate while New Zealand breeding species have moved to the coast.

As noted above, antifouling materials may adversely affect benthos and hence potential food resources for shorebirds. Assessment of potential effects falls outwith this study.

Motueka Sandspit is undergoing significant changes at present, moving landwards at the northern, basal, end. In the event that the sandspit is breached at some future time the sediment characteristics of the bay between the sandspit and mainland are likely to change and this is likely to impact benthos and thereby prey for shorebirds. Changes to topography and hydrology resulting from such a breach may require a review of the moorings area – any such future review of moorings should also include an assessment of potential impacts on shorebirds.

## **Conclusions**

- **The two proposed mooring areas at Otuwhero and Motueka are already used for boat mooring and are subject to human disturbance.**
- **The proposed mooring site at Otuwhero is not of significance to shorebirds.**
- **The Motueka area is used for foraging by shorebirds, but this is mostly in the area around the edge of the main channel.**
- **The revised proposed mooring site at Motueka is smaller than the area currently used for mooring, and 75% smaller than that originally put out for public consultation.**
- **The revised proposed Motueka site removes the mooring area from the silty channel edge preferred by Bar-tailed Godwits for foraging.**
- **The proposed arrangements for moorings at both Otuwhero and Motueka will not result in adverse effects on any threatened or at risk bird species.**

## **References**

- Brine, O., Hunt, L., Costello, M.J. 2013. Marine biofouling on recreational boats on swing moorings and berths. *Management of Biological Invasions* 4: 327-341.
- Burton, N.H.K., Armitage, M.J.S., Musgrove, A.J., Rehfish, M.M. 2002. Impacts of man-made landscape features on numbers of estuarine waterbirds at low tide. *Environmental Assessment* 30: 857-864.
- Davidson, R.J. 2015. Biological desktop report in relation to proposed mooring areas located between Waimea Inlet and Whanganui Inlet: biological features and issues. Prepared by Davidson Environmental Ltd. For Tasman District Council. Survey and monitoring report no. 806. 36p.
- Demers, M.C.A., Davis, A.R., Knott, N.A. 2013. A comparison on the impact of 'seagrass-friendly' boat mooring systems on *Posidonia australis*. *Marine Environmental Research* 83: 54-62.
- Department of Employment, Economic Development and Innovation. 2011. *Environmentally-friendly moorings trials in Moreton Bay. Report to SEQ Catchments*. Brisbane, Queensland.
- Environmental Protection Authority. 2013. Evaluation and review report: APP201051 - antifouling paints.
- Herbert, R.J.H., Crowe, T.P., Bray, S., Shearer, M. 2009. Disturbance to intertidal soft sediment assemblages caused by swinging boat moorings. *Hydrobiologia* 625: 105-116.
- Robertson, B., Stevens, L. 2012. Tasman coast: Waimea Inlet to Kahurangi Point habitat mapping, ecological risk assessment, and monitoring recommendations. Prepared for Tasman District Council.
- Schuckard, R., Melville, D.S. 2013. Shorebirds of Farewell Spit, Golden Bay and Tasman Bay. Prepared for Nelson City Council and Tasman District Council.
- Tasman District Council. 2013. Mooring specifications 2013.  
<http://www.tasman.govt.nz/recreation/boating-fishing/boating-in-tasman/moorings/mooring-specifications/> [accessed 3 April 2015]

## FIGURES

### OUTWHERO/MARAHAU



Fig. 1. Proposed Otuwhero mooring area shown in green – red dots existing moorings. Total area 18,640 m<sup>2</sup>.



Fig. 2. Native planting, Otuwhero Spit – shrubby vegetation will make the area unattractive to shorebirds.



Fig. 3 Outer beach Otuwhero, Potential nesting site for Variable Oystercatcher and Banded Dotterel.



Fig. 4. Variable Oystercatcher foraging for sand scarab larvae, Otuwhero Spit



Fig. 5. Kayakers at the base of Otuwhere Spit.



Fig. 6. Novice paddle boarding in the sheltered waters of Otuwhere Inlet.





Fig. 7. Family with well behaved dog at base of Otuwhero Spit, Marahau



Fig. 8. Outer beach, Otuwhero Spit, Marahau – note human footprints in the sand.



Fig. 9. Location of high tide roost sites (red circles) and movements of shorebirds to foraging areas on the ebb tide (yellow lines).



Fig. 10. High tide roost of South Island Pied Oystercatchers offshore of Otuwhero Spit, Marahau.



Fig. 11. Tidal flat offshore of Otuwhero Spit where Bar-tailed Godwits, Variable Oystercatchers and South Island Pied Oystercatchers foraged.



Fig. 12. South Island Pied Oystercatchers foraging for cockles.



Fig. 13. Mooring area at Otuwhero Spit.

# MOTUEKA



Original proposal (xx m<sup>2</sup>)

Revised proposal (xx m<sup>2</sup>)

Fig. 14. Original (January 2014) and revised (March 2015) Motueka 2 proposed mooring area shown in green – red dots existing moorings.

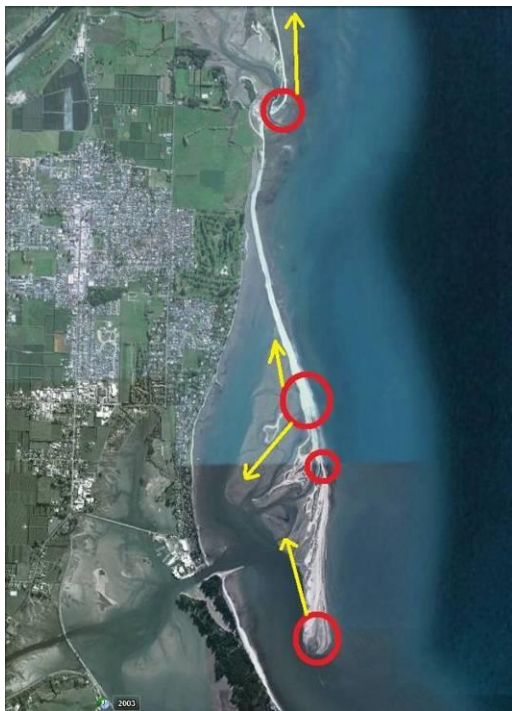


Fig. 15. Location of high tide roost sites (red circles) and movements of shorebirds to foraging areas on the ebb tide (yellow lines).



Fig 16. Soft sediment at the top the beach c100m south of the *Janie Seddon*.



Fig. 17. Firm sediment in the existing mooring area.



Fig. 18. Vessels resting on tidal flat, Motueka



Fig. 19. Mussels encrusting the hull of a vessel moored at Motueka.



Fig. 20. A variety of mooring fixtures, Motueka.



Fig.21. Scouring (shallow pools) on tidal flat from vessel movement, Motueka



Fig. 22. Footprints of Bar-tailed Godwits in soft sediment.



Fig. 23. Bar-tailed Godwit footprints were found c3m from this vessel (41.12703S 173.02423E)



Fig. 24. Bar-tailed Godwits foraging in silty area off Motueka Quay during the ebb tide.



Fig. 25. South Island Pied Oystercatchers feeding in the vicinity of a moored vessel, Motueka. Note that foreshortening may make the birds appear closer to the vessel than they really are.



Fig. 26. 2 Turnstones (foreground) foraging and 1 Variable Oystercatcher resting on shellbank adjacent to main channel.



## APPENDIX 1

### Threatened or at risk bird species recorded at Marahau, and Motueka Sandspit and adjacent intertidal areas 2012-2014 (Ornithological Society of New Zealand unpublished)

Species	NZ threat status <sup>1</sup>	IUCN threat status	Motueka	Marahau
Southern New Zealand Dotterel	Nationally critical	[Endangered]	x	
Black Stilt*	Nationally critical	Critically endangered	x	
Black-billed Gull	Nationally critical	Endangered	x	x
Wrybill	Nationally vulnerable	Vulnerable	x	x
Red Knot	Nationally vulnerable		x	
Banded Dotterel	Nationally vulnerable		x	x
Caspian Tern	Nationally vulnerable		x	x
Red-billed Gull	Nationally vulnerable		x	x
Pied Shag	Nationally vulnerable		x	x
South Island Pied Oystercatcher	At risk - declining		x	x
Pied Stilt	At risk - declining		x	x
Bar-tailed Godwit	At risk - declining		x	x
White-fronted Tern	At risk - declining		x	x
Variable Oystercatcher	At risk - recovering		x	x

\* The birds recorded at Motueka (at least 2 different individuals) appear to be hybrids (with Pied Stilts), but predominantly show Black Stilt characters.

<sup>1</sup> Robertson, H.A. *et al.* 2013. Conservation status of New Zealand birds, 2012. *New Zealand Threat Classification Series 4*. Department of Conservation, Wellington. 22 p.



**Consolidated Bylaw**

Chapter #

# **Mooring Area Bylaws**

**XX 2019**

Statement of Proposed for Consultation

# Table of Contents

---

<b>1. Preliminary Provisions .....</b>	<b>3</b>
1.1 Title and Commencement .....	3
1.2 Purpose .....	3
1.3 Legal Basis .....	3
1.4 Application .....	3
1.5 Definitions .....	3
<b>2. General Requirements .....</b>	<b>4</b>
2.1 Requirement for Authorisation .....	4
2.2 Requirement for a Mooring Licence .....	4
<b>3. Application .....</b>	<b>4</b>
3.1 Information to be provided with any application .....	4
3.2 Granting of Mooring Licences .....	5
3.3 Conditions of Mooring Licence .....	6
3.4 Costs .....	7
<b>4. Mooring Area Management and Maintenance .....</b>	<b>7</b>
4.1 Renewal of Mooring Licences .....	7
4.2 Right to Reconsideration .....	7
4.3 Transfer of Mooring Licence .....	7
4.4 Removal of Moorings .....	7
<b>5. Allocation .....</b>	<b>8</b>
5.1 Initial Allocation of Space .....	8
<b>6. Fees .....</b>	<b>9</b>
<b>Fees and Charges .....</b>	<b>11</b>
Mooring Licence .....	11

---

# 1. Preliminary Provisions

---

## 1.1 Title and Commencement

- 1.1.1 These Bylaws are (and may be cited as) the Tasman District Council Consolidated Bylaw, Chapter #, Mooring Area Bylaw ##.
- 1.1.2 These Bylaws come into force on the same day as the Mooring Area provisions [refer to specific provision] in the Tasman Resource Management Plan become operative.

## 1.2 Purpose

- 1.2.1 These Bylaws are made for the purpose of ensuring maritime safety within specifically identified Mooring Areas in Tasman District.

## 1.3 Legal Basis

- 1.3.1 This Bylaw is made pursuant to Part 3A (Section 33M) of the Maritime Transport Act 1994.
- 1.3.2 The provisions in the Tasman District Council Consolidated Bylaw, Chapter 5: Navigation and Safety Bylaw 2015 apply in the Mooring Area.
- 1.3.3 Where this Mooring Area Bylaw ## is inconsistent with the Resource Management Act 1991 or any rule made under the Resource Management Act 1991, then under the Maritime Transport Act 1994 s. 33M(2)(i), that Act or rule prevails.

## 1.4 Application

- 1.4.1 This Bylaw applies to all Mooring Areas identified on the planning maps of the Tasman Resource Management Plan.

## 1.5 Definitions

**Communally Established Mooring System Agreement** means a written agreement between individuals agreeing to fund, establish, use and maintain a communal mooring system in accordance with the conditions of the agreement.

**Mooring** means any weight or article placed in or on the foreshore or the bed of a waterway for the purpose of securing a vessel, raft, aircraft, or floating structure; and includes any wire, rope, chain, buoy, or other device attached or connected to the weight. Mooring may include a system of weights and attachments for the same purpose but does not include an anchor that is normally removed with the vessel, raft, aircraft, or floating structure when it leaves the site or anchorage.

**Mooring Area** means the area identified by the Council as a mooring area in the Tasman Resource Management Plan planning maps.

**Kaiteriteri Mooring Area 1** means the area identified by the Council as Kaiteriteri Mooring Area 1 in the Tasman Resource Management Plan planning maps ## ##.

**Kaiteriteri Mooring Area 2** means the area identified by the Council as Kaiteriteri Mooring Area 2 in the Tasman Resource Management Plan planning maps ## ##.

## 2. General Requirements

---

### 2.1 Requirement for Authorisation

- 2.1.1 No person may place a mooring in a Mooring Area unless the mooring is a permitted activity in the Tasman Resource Management Plan or they hold a coastal permit for that mooring. All moorings are required to be fit for purpose.

### 2.2 Requirement for a Mooring Licence

- 2.2.1 No person shall place a mooring in a Mooring Area without holding a mooring licence issued by Council, unless the mooring is authorised by a coastal permit.
- 2.2.2 Where an application for a mooring licence renewal has been accepted by Council prior to the expiry of the mooring licence, the holder of the mooring licence can continue to moor until the application has been granted or declined.

**Explanatory Note:**

*Within the identified Mooring Areas, moorings are a permitted activity (subject to meeting the conditions ##### of the Tasman Resource Management Plan) and can be established without the coastal permit ordinarily required. The most important condition enabling a mooring to be permitted is the requirement to hold a mooring licence issued by the Harbourmaster.*

*In some Mooring Areas there are pre-existing moorings which have coastal permits issued under the Resource Management Act 1991 and these moorings can remain in the Mooring Area until expiry of the permit. Following expiry of the coastal permit, the mooring owner will need to apply for a mooring licence from the Harbourmaster.*

## 3. Application

---

### 3.1 Information to be provided with any application

- 3.1.1 The following information must be provided with any application for a mooring licence, unless advised by the Harbourmaster. The application may be placed on hold or returned if the required information is not provided.
- 3.1.1.1 Details of the vessel or vessels intended to be moored, including overall length, draft, general description, any commercial registration number(s) and, where possible, a photograph.
- 3.1.1.2 Details of any sewage treatment or holding facilities aboard the vessel(s).
- 3.1.1.3 A statement of whether or not any vessel using the mooring is likely to be occupied overnight (also known as 'liveaboard').
- 3.1.1.4 The proposed position as latitude and longitude in WGS84 datum or as easting and northing in NZTM format.
- 3.1.1.5 Depth reduced to chart datum.
- 3.1.1.6 Composition of the seabed.
- 3.1.1.7 Details of the proposed mooring construction, including a sketch and specifications of components.
- 3.1.1.8 Calculated swing radius to the stern of the longest vessel proposed for the proposed mooring specifications and location at chart datum.

- 3.1.1.9 Information on how the mooring is intended to be used, including whether for a commercial or recreational vessel or for use of the applicant or of another party.
- 3.1.1.10 In Torrent/Rākauroa or Boundary Bay Mooring Areas, proof of an interest in a land title.

## 3.2 Granting of Mooring Licences

3.2.1 Any application for a mooring licence will be granted, except in the following circumstances:

3.2.1.1 The Harbourmaster is of the opinion that the mooring or use of it is likely to:

- (a) diminish the level of safety for other activities in the vicinity;
- (b) give rise to congestion or undue difficulty for manoeuvring vessels with respect to access to existing authorised moorings or any wharf, jetty, boat ramp or beach, or for transiting a narrow channel;
- (c) have any other adverse effects on maritime safety;
- (d) cause excessive noise or other nuisances that may be considered objectionable; or
- (e) occupy an excessive proportion of the overall space of that mooring area, with regard to vessel size, or to swing radius, or to number of mooring licences already held (or applied for) by applicant where in the opinion of the Harbourmaster there is a issue of navigation and safety.
- (f) be not fit for purpose.

3.2.1.2 The mooring or use of the mooring will occupy a position at or within the swing circle of:

- (a) a mooring authorised by a mooring licence;
  - (b) a mooring authorised by coastal permit; or
  - (c) a mooring licence that has expired within the last six months;
- unless the applicant holds the mooring licence or coastal permit for the mooring occupying that site.

3.2.1.3 The mooring site is within Kaiteriteri Mooring Area 2, except where:

- (a) the application is for a mooring to be used by a commercial vessel with a CVO licence, which needs to be located in the Bay; or
- (b) the applicant is an acknowledged owner of a mooring within Kaiteriteri Mooring Area 2 and that mooring was previously authorised by Schedule 25A of the Tasman Resource Management Plan; or
- (c) the application meets the terms of a communally established mooring system agreement approved by the Harbourmaster .

3.2.1.3 The mooring site is within Kaiteriteri Mooring Area 1, except where:

- (a) the application is for a mooring for public use.

3.2.1.4 Notwithstanding the provisions in 3.2.1.1, 3.2.1.2 and 3.2.1.3, at the discretion of the Harbourmaster a mooring licence may be granted within the same Mooring Area, but for a location different than applied for.

**Explanatory Note:**

*The holders of mooring licences can generally expect their licences to be renewed (with or without a change in conditions) at the end of the term. Licence holders have up to six months after the expiry of their licence to reapply before the space becomes available for re-allocation.*

*The situation is slightly different at Kaiteriteri where recreational and commercial demand for moorings is very high. As part of the overall management of the Bay two areas have been set aside for moorings. The first area is Kaiteriteri Mooring Area 1, which provides high-density seasonal public moorings and Kaiteriteri Mooring Area 2, which provides mooring space for commercial boats. Land access continues to be provided by the boat ramp and anchoring space is available anywhere within the bay in accordance with the provisions in the Navigation and Safety Bylaw 2015.*

**Advice:** *Applications for a mooring licence in the Torrent/Rākauroa or Boundary Bay Mooring Area can only be granted if the applicant has an interest in a land title in that area. Under the provisions of the Tasman Resource Management Plan ### any other person wishing to establish a mooring in those areas is required to apply for a coastal permit.*

### 3.3 Conditions of Mooring Licence

3.3.1 Any mooring licence issued under section 3.2 may be subject to conditions, including but not limited to:

- (a) duration of licence period (for up to five years and may include a common expiry date for the mooring area);
- (b) seasonal mooring commencement and cessation dates;
- (c) location of mooring;
- (d) design of mooring system and specifications of mooring components;
- (e) maximum vessel length, tonnage and draft;
- (f) pollution prevention arrangements;
- (g) biosecurity risk management arrangements (for purposes of maritime safety);
- (h) lighting and pumping arrangements;
- (i) inspection requirements;
- (j) markings and identification;
- (k) maintenance requirements;
- (l) public use;
- (m) a requirement that the owner of the mooring shall be liable in any event for any shift in the position or inadequate construction or maintenance of any licensed mooring; and
- (n) fees payable.

3.3.2 Failure to comply with any condition is an offence and may lead to the cancellation of the licence.

### **3.4 Costs**

- 3.4.1 Any costs incurred by a mooring licence holder in complying with the conditions of the mooring licence will be met by the mooring licence holder.

## **4. Mooring Area Management and Maintenance**

---

### **4.1 Renewal of Mooring Licences**

- 4.1.1 The Harbourmaster may undertake consultation with mooring licence holders within the mooring area prior to reviewing the conditions on any mooring licence.
- 4.1.2 A Mooring Area User Group may establish itself at any time and may request the Harbourmaster to consider a collaborative approach to the management of that Mooring Area at any time. The Harbourmaster may accept or decline any such request.
- 4.1.3 Despite provision 3.4.1, where a collaborative approach is taken to the management of a Mooring Area, then the costs of meeting the conditions may be shared or be apportioned by agreement of the mooring licence applicants affected by the change in conditions.

### **4.2 Right to Reconsideration**

- 4.2.1 Any mooring licence holder dissatisfied with any condition imposed by the Harbourmaster under provisions 3.3 of this Bylaw may object in writing to the Council within 15 working days of the decision. The objection will be considered by a Review Panel and the Panel's decision will be given in writing within 20 working days of receiving the request.

### **4.3 Transfer of Mooring Licence**

- 4.3.1 A mooring licence may be transferred upon written notice to the Harbourmaster. Any such transfer becomes effective 10 working days after the receipt of such notice, or earlier if agreed to in writing by the Harbourmaster.
- 4.3.2 No fees shall be refunded by Council upon transfer of a mooring licence.
- 4.3.3 Following any transfer, the Harbourmaster may require the new holder of a mooring licence to apply for a new licence if in his opinion there are substantive changes to the nature of use or specifications of the mooring intended.

### **4.4 Removal of Moorings**

- 4.4.1 The Harbourmaster may cancel any mooring licence, and may remove or authorise the removal of any mooring and any vessel attached to such mooring (all costs of so doing are a debt to the Council by the owner of such mooring), in the following circumstances:
- 4.4.1.1 The conditions of the mooring licence are breached or there is ongoing breach of conditions, including non or late payment of fees.
- 4.4.1.2 The mooring has not been established or has not been used within a 12-month period.



- 4.4.1.3 The current holder of the mooring licence cannot be contacted after reasonable effort, or has failed to keep contact details up to date with Council.
- 4.4.1.4 The mooring is not maintained to a good condition or not fit for purpose.

**Explanatory Note:**

*Over time vessels are bought and sold and the needs of mooring owners change. To enable the continued efficient and safe management of Mooring Areas, the conditions on mooring licences need to be reviewed at the time of licence renewal, particularly those conditions relating to the size, type and location of the vessel. The review of conditions may occur individually, or in some Mooring Areas the conditions of all licences may be reviewed at the same time through a common expiry date.*

*The bylaw also provides for mooring licences to be transferred and for moorings to be removed in certain conditions.*

## **5. Allocation**

---

### **5.1 Initial Allocation of Space**

- 5.1.1 The Council will not accept any application for a mooring licence until a date that is publicly notified for the mooring area.
- 5.1.2 Applications for licences in Mooring Areas (excluding Kaiteriteri Mooring Areas 2) will be received, considered and decided on using the following preferential system of allocation:
- 5.1.2.1 Firstly, to existing mooring owners authorised either by Schedule 25A of the Tasman Resource Management Plan or by a coastal permit.
- 5.1.2.2 Secondly, for a mooring~~s~~ for public use.
- 5.1.2.3 Thirdly, any other applicant on a first-in, first-served basis.

Advisory Note: applications are subject to 3.2

#### **5.1.3 Kaiteriteri Mooring Area 2**

- 5.1.3.1 Any application for a mooring licence in Kaiteriteri Mooring Area 2 will only be accepted from:
- (a) an applicant that is an acknowledged owner of a mooring within Kaiteriteri Mooring Area 2 and that mooring was authorised on [Date] in Schedule 25A of the Tasman Resource Management Plan; or
  - (b) a holder of a Commercial Vessel Operators licence, who needs to be located in the Mooring Area for commercial reasons and has, in the opinion of the Harbourmaster, had a persistent history of anchoring or mooring in the Bay for a number of years; or
  - (c) an applicant meeting the conditions of a or b and permitted to apply in accordance with the terms of a communal mooring system agreement approved by the Harbourmaster.
- 5.1.3.2 Any application for a mooring licence will be received, considered and decided on using the following preferential system of allocation:

- (a) Firstly, to existing mooring owners previously authorised in Kaiteriteri Mooring Area 2 by Schedule 25A of the Tasman Resource Management Plan.
- (b) Secondly, to any other applicant as and where they can be safely accommodated within the Mooring Area.
- (d) Or in accordance with the terms of a communal mooring system agreement approved by the Harbourmaster.

#### 5.1.4 Waitlist

- 5.1.4.1 Any person may contact the Harbourmaster and ask to be placed on the waitlist for a Mooring Area. The Harbourmaster must maintain a waitlist. The waitlist will be maintained on a first-in, first-served basis.
- 5.1.4.2 When sufficient space for a new mooring is either identified or becomes available then the first person on the waitlist for that Mooring Area will be offered the opportunity to apply for a mooring licence. The offer may contain restrictions on the location, vessel type or size that can be applied for.
- 5.1.4.3 Where a person offered the opportunity to apply for a mooring licence declines that opportunity, or the application is unsuccessful, then the space will be offered to the next person on the waitlist.
- 5.1.4.4 Waitlisted applicants are required to advise the Harbourmaster of any changes to their contact details. Persons unable to be contacted will be deleted from the waitlist.

#### **Explanatory Note:**

*The locations within the Tasman District which provide for safe mooring are limited. Consequently moorings tend to be clustered in distinct locations around the District. In the past, illegal, poorly located and maintained moorings and overcrowding have affected safety and navigation in these areas. This bylaw enables the type of boat, number and location of moorings within a Mooring Area to be controlled to maximise use while maintaining navigational safety. As part of the transition to this new management system, the Council will initially need to allocate mooring licences where there are pre-existing authorised moorings or demand is high.*

*The opportunity to apply for a mooring licence will be offered to existing mooring owners first (authorised by the Tasman Resource Management Plan or by coastal permit), then public use groups, then individuals. This preferential system will enable the current (lawful) mooring owners to remain in the Mooring Area and will encourage the establishment of public moorings which enable the greatest number of people to safely moor within the area. All other individual applications will be processed on a first-come, first-served basis and, subject to the provisions in 3.2 including there being sufficient space, will be granted.*

*Following the initial allocation of mooring licences in the Mooring Areas (except Kaiteriteri), **any** person can apply for a mooring licence on a first-in, first-served basis or can ask for their name to be added to a waitlist if the mooring area is considered full.*

## 6. Fees

- 6.1 The Council is entitled to charge a fee in respect of every new mooring licence application received and every mooring licence renewal issued. The fees payable in respect of every

mooring licence shall be listed in Schedule 1 forming part of this Bylaw, and may be on a pro-rata basis.

- 6.2 Any mooring licence shall be subject to payment of an annual monitoring and administration fee due by 1 July each year, or earlier if a shorter term is specified on the licence. If the fee is not paid within 28 days, the licence may be cancelled.
- 6.3 Every licence renewal application fee accepted after 1 July shall be subject to a late-payment fee. If a renewal application and fee is received after the expiry date on the licence, Council may treat that renewal as a new application.
- 6.4 Council shall be entitled to recover reasonable costs incurred in monitoring any particular mooring licence, where that licence has required specific monitoring attention in excess of one hour of staff time in any given 12-month period.
- 6.6 The Chief Executive may, by written agreement, authorise an incorporated body to act as Council's agent for routine administration of mooring licence renewals for a given Mooring Area, and any such incorporated body shall be entitled to retain such fees or proportion of such fees collected as may be agreed.
- 6.7 At the Chief Executive's discretion, Council may waive application or renewal fees for applications by public organisations.

## Fees and Charges

---

### Mooring Licence

#### Application and Renewal of existing mooring licence

For new applications or renewal of expiring licence with substantial changes or lack of inspection report.

\$280.00

#### Annual monitoring and administration fee

\$100

#### Renewal of existing mooring licence

A renewal application where there are no substantial changes to the licence and where all inspection reports have been provided.

\$100.00

#### Late payment fee (for annual renewal)

Additional 20%

#### Additional Costs

Reasonable staff costs incurred by Council in assessing an application or enforcing compliance with a licence – hourly rate.

\$140.00

Reimbursement of any reasonable and necessary additional costs incurred by Council in assessing an application or enforcing compliance.

#### Waitlist

Administration cost

\$50

Regular text – denotes current text in the Tasman Resource Management Plan.

[blue text](#) – denotes proposed additions to the Tasman Resource Management Plan.

~~Strikethrough text~~ – denotes proposed deletions to the Tasman Resource Management Plan.

## **CHAPTER 20: EFFECTS OF CRAFT USING THE SURFACE OF COASTAL WATERS**

### **20.1 Craft Activity**

#### **20.1.1 Issue**

The passage of craft across coastal waters may compromise navigational safety with other craft. Craft movements need to be considered in relation to the siting, marking and lighting of any structures in the coastal marine area. Craft activity may have effects on amenity and natural values.

#### **20.1.2 Objective**

Safe navigation, amenity values and natural values that are not compromised by the passage of craft, or by other activities on the surface of the water.

#### **20.1.3 Policies**

*Refer to Policy sets 21.1, 21.2, 21.6, 21.7.*

*Refer to Rule sections 25.3.*

**20.1.3.1** Council will ensure that movements of craft or other activities on the surface of coastal waters do not create or aggravate risks to safe navigation, particularly in areas of intensive seasonal use of craft and in relation to the scale, intensity, frequency, duration and mix of activities.

---

**20.1.3.2** To avoid, remedy or mitigate adverse effects on safe navigation from structures, occupation or other uses of the coastal marine area, especially in established fishing areas, ports or their approaches, or in other intensively used coastal marine space.

20.1.3.# Reduce navigational and safety risk to other coastal users by enabling mooring to establish as permitted activities in appropriately located Mooring Area.

20.1.3.# Avoid the establishment of coastal activities within Mooring Area where the activity will adversely affect the use of the Mooring Area for mooring.

20.1.3.# Minimise the space occupied by moored and anchored craft by:

- a) Providing Mooring Area in appropriate locations and encourage the use of mooring within these areas as permitted activities.
- b) Encourage the establishment and use of public mooring in appropriate locations.
- c) Require the removal of any unauthorised, abandoned, redundant or obsolete mooring.
- d) Require the use of space efficient mooring systems where practicable and appropriate.

**20.1.3.3** To avoid, remedy or mitigate adverse effects on amenity values and natural values, including:

- (a) disturbance of wildlife or marine mammals;
- (b) disruption to natural quiet;
- (c) degrading the quality of experience of particular activities;

from the scale, intensity, frequency, duration or mix of activities using craft.

## **20.1.20 Methods of Implementation**

### **20.1.20.1 *Regulatory***

- (a) Rules that regulate construction and operation of structures in the coastal marine area.
- (b) Rules that regulate amenity effects of the use of craft.
- (c) Rules that regulate disturbance or damage to animal or plant habitats by the use of craft.
- (d) Rules that regulate the use of coastal marine space for aircraft takeoffs and landings.
- (e) ~~Navigation and Safety~~ Bylaw provisions that regulate the speed of craft.
- (f) ~~Navigation and Safety~~ Bylaw provisions that reserve space in certain locations for particular uses of craft, or other mobile activities on the surface of coastal waters, including anchorages, access lanes, swimming, water-skiing, windsurfing, or jet-skiing, for commercial, recreational, or any other purpose; or that prohibit activities in certain locations.

- (#) Rules that encourage the establishment of moorings in Mooring Areas.
- (g) ~~Navigation and Safety~~ Bylaw provisions that allow occupation and use of areas by craft for special occasions such as regattas or races.
- (h) ~~Navigation and Safety~~ Bylaw provisions that require craft or structures to be adequately lit.
- (i) ~~Navigation and Safety~~Safety Bylaw provisions that require commercial uses of craft to be licensed in relation to:
  - (i) the seaworthiness of the craft;
  - (ii) the competence of the operator; and
  - (iii) the safety of the commercial operation.
- (j) ~~Navigation and Safety~~ Bylaw provisions that regulate use and management of moorings.

### **20.1.20.2 Investigations and Monitoring**

- (a) A programme of monitoring the intensity of craft use, particularly at intensively used locations such as Kaiteriteri Bay, Astrolabe Roadstead, Torrent Bay/Rākauroa and The Anchorage.
- (b) Investigations into the need for reserved areas for access lanes, water-skiing and other activities at these and other locations, or the need to prohibit certain water surface activities at certain locations.
- (c) Recording of all new coastal structures for notification to the New Zealand Hydrographic Authority, Land Information New Zealand~~Navy Hydrographer.~~

....

### **20.1.30 Principal Reasons and Explanation**

Activities involving the movement of watercraft, including vessels and aircraft, in coastal waters may create navigational safety risks, particularly in the vicinity of other craft, people or structures in the coastal marine area. There is a need to control features such as speed, location, seaworthiness and operator competence in relation to craft movements. As well, there is a need to control the siting, marking and lighting of structures in the coastal marine area to avoid or reduce the risk of craft colliding with structures, particularly in areas most often used by craft. Amenity and natural values can be affected by the use of craft. ~~The New Zealand Coastal Policy Statement requirement for the Navy Hydrographer to be advised of new structures in the coastal marine area assists safe navigation by enabling marine charts to be amended and notices to mariners to be issued.~~

# CHAPTER 21: EFFECTS OF DISTURBANCE, STRUCTURES AND OCCUPATION ON COASTAL MARINE CONSERVATION, HERITAGE, ACCESS AND AMENITY VALUES

## Table of Contents

	Page
21.0 Introduction .....	<del>44441</del>
21.1 Preservation of Natural Character .....	<del>66663</del>
21.2 Protection of Habitats and Ecosystems .....	<del>88885</del>
21.3 Protection of Landscapes, Seascapes and Natural Features .....	<del>1313131310</del>
21.4 Protection of Natural Coastal Processes .....	<del>Error! Bookmark not defined. Error! Bookmark not defined. 141410</del>
21.5 Protection of Cultural Heritage Values .....	<del>1414151512</del>
21.6 Effects of Public Access .....	<del>1414161613</del>
21.7 Enhancement of Amenity Values .....	<del>1717171714</del>
21.50 Environmental Results Anticipated .....	<del>Error! Bookmark not defined. Error! Bookmark not defined. 181815</del>

## 21.0 Introduction

This chapter deals with the effects of use and development on natural resources, conservation of natural resources, features, processes, ecosystems, and heritage, access and amenity values in the coastal marine area. It does not deal with these matters on dry land in the coastal environment, despite the fact that many of these issues cross the boundary between land and sea. Issues relating to the effects of subdivision, use and development of coastal land are addressed in chapters 5, 6, 8, 9 and 10.

....

The Resource Management Act and the New Zealand Coastal Policy Statement require the natural character of the coastal environment to ~~be preserved~~ ~~be , while allowing appropriate use and development~~ ~~preserved and protected from inappropriate subdivision, use, and development~~. Natural character may include a naturalness or unmodified form for coastal marine space, processes, materials, habitats and ecosystems. Some areas are extensively and significantly modified, and others less so. Permanent structures



or other physical modifications such as land disturbance may alter the natural character either within the coastal marine area or on coastal land. The use of adjacent coastal land may affect the natural character of the coastal marine area, particularly through access to the foreshore or sea.

The Resource Management Act and the New Zealand Coastal Policy Statement also require the protection of ~~outstanding~~ natural features and natural landscapes (including seascapes) from inappropriate subdivision, use ~~or and~~ development. The dominant landscape of the coastal marine area is surface seascape (the expanses of coastal water) together with the shoreline of beaches, tidal flats or cliffs. The underwater seascape is also important. The naturalness of the seascape is a significant element of landscape value in the coastal marine area. This includes the general absence of structures or the presence only of those that are visually unobtrusive or otherwise appropriate in a coastal setting.

...

There are limitations on the scope of the Plan to address adverse effects on habitats and on marine organisms from lawful harvesting of fisheries resources by the disturbance of foreshore or seabed. The Plan also cannot control enhancement or harvesting activities that involve structures, occupation or disturbance, if the purpose of the control is to manage any fisheries resource or if the control (except control over structures) results in the allocation of access to a fisheries resource between fishing sectors. "Fisheries resources" include any marine organism. These effects on habitats or marine organisms, or controls on fisheries resources, should be addressed by the ~~relevant Ministry Director General of Fisheries~~ under the Fisheries Act 1996, ~~through fishing permits and regulations~~. An indirect means of protecting fisheries resources results from the creation of marine reserves where the taking of fish is prevented for purposes of scientific study of marine resources. Marine reserves in the region at 1998 are the Tonga Marine Reserve adjoining Abel Tasman National Park, and Te Tai Tapu Marine Reserve in the southern part of Whanganui Inlet.

...

The coastal marine area is public domain, and the Act and the ~~New Zealand Coastal Policy Statement require the maintenance and enhancement of public access to and along the coastal marine area. The New Zealand Coastal Policy Statement specifically recognises the need for public open space within and adjacent to the coastal marine area, for public use and appreciation including active and passive recreation. The New Zealand Coastal Policy Statement also places importance on walking access to and along the coast.~~ Some structures and works facilitate access and use, but others impede it. Public access, including the use of craft, may result in an intensity of use of the coastal marine area that has adverse effects on navigational safety or on natural values. For example, congestion of craft occurs along parts of the Abel Tasman National Park coastline, where safety issues are compounded by the mix of craft types – particularly by their different operating speeds and degrees of visibility.

The coast is a finite resource and the New Zealand Coastal Policy Statement recognises and promotes the efficient use of the coast by activities. Consolidating activities into one area, encouraging multiple and public use structures and requiring developments to occur without lengthy delays are some ways in which efficient use can be made of the coast. The removal of abandoned, redundant or obsolete structures also frees up the coast for other uses.

Areas have been identified for the activity of mooring and mooring within the Mooring Areas is permitted subject to the mooring owner holding a Mooring Licence issued by the Harbourmaster. In the first instance Mooring Licences will be allocated to mooring owners who hold a resource consent for mooring within the Mooring Area, then to applicants for public moorings and then on a first come first served basis. Once Mooring Areas become full, Council will allocate mooring space to those listed on the Wait list for the Mooring Area. In Kaiterteri, one Mooring Area is restricted for public moorings and the second Mooring Area is restricted to commercial operators.

The coastal marine area contains sites and areas of natural and cultural heritage value, particularly areas of traditional Māori association. Few items of historical heritage value exist in the coastal marine area, and without some economic use these are likely to continue to deteriorate because of the nature of the marine environment. The Act places

significance on the protection of heritage values generally. Natural habitats and seascapes can be regarded as natural heritage resources and require protection on this basis also. Places or areas of heritage value to Māori include traditional seafood collecting areas (mahinga mātaihai), fishing grounds, places of spiritual significance (wāhi tapu) and landing sites (tauranga waka). The coastal marine area itself may be regarded by Māori as a valued resource or taonga. Tangata whenua may oppose the use or development of these areas. An example is the threat to tangata whenua interests of aquaculture in the vicinity of ancestral land and kai moana at Pariwhakaoho. Tangata whenua may seek recognition of entitlements referred to by the Treaty of Waitangi. Tangata whenua interests in the heritage values of the coastal marine area may span across traditional and commercial concerns, but all of which may be equally regarded as taonga. There are a number of processes under fisheries and other legislation in addition to the Act that are relevant to such values or interests. For example, threats to kai moana from other fishing activities are managed ~~by the Ministry of Fisheries~~ under the Fisheries Act and cannot be addressed in this Plan. The Fisheries Act also includes provisions for tangata whenua to manage important traditional fisheries through the establishment of mahinga mātaihai and taiapure.

....

## 21.1 Preservation of Natural Character

### 21.1.1 Issue

Use or development in the coastal marine area, including structures, occupation and disturbance may adversely affect the natural character of the coastal environment. The appropriate form, scale or location of such use or development that preserves natural character is to be determined.

### 21.1.2 Objective

Preservation of the natural character of the coastal marine area, particularly its margins, and including the maintenance of all values that contribute to natural character, and its protection from the adverse effects of use or development.

### 21.1.3 Policies

*Refer to Rule sections 25.1 – 25.5, 36.2, 36.6, 36.7.*

- 21.1.3.1** To avoid, remedy or mitigate adverse effects on the natural character of the coastal marine area from activities, including:
- (a) physical modification to foreshore or seabed, including reclamation, dredging, removal or deposition of material, or other disturbance;
  - (b) disturbance of plants, animals, or their habitats;
  - (c) structures, including impediments to natural coastal processes;
  - (d) the use of vessels or vehicles;

- (e) stock grazing or trampling on coastal margins;
- (f) the discharge of any contaminant or waste.

**21.1.3.2** To avoid, remedy or mitigate adverse effects on outstanding or other significant natural features and seascapes in the coastal marine area, including natural expanses of coastal water, arising from modification other than through natural processes.

**21.1.3.3** To restrict the placement of structures in or along the coastal marine area to those for which a coastal location is necessary and whose presence does not detract from the natural character of the locality, including the natural character of adjoining land.

**21.1.3.4** To avoid, remedy, or mitigate damage to foreshore, seabed and coastal marine animals and plants, caused by the passage of people, vehicles, vessels, or passage or grazing by stock.

**21.1.3.5** Require the removal or remove unauthorised, abandoned, obsolete or redundant structures adversely affecting natural character except where removal would have adverse effects on the environment or where the structure has heritage or cultural values.

**21.1.3.6** Minimise the adverse effects of moorings on natural character by identifying appropriate areas for mooring and encourage mooring to establish within those Mooring Area.

## **21.1.20 Methods of Implementation**

### **21.1.20.1 Regulatory**

- (a) Rules that control disturbance, including reclamation, deposition, or excavation or removal of material, or structures or other works or activities having adverse effects on:
  - (i) the foreshore or seabed;
  - (ii) the natural movement of water, sediment, biota or air; or
  - (iii) natural ecosystems.
- (b) Rules that control the effect of structures in areas with significant natural ecosystem values, including estuaries, sand beaches, and areas adjacent to coastal land with significant natural ecosystem values, and which include prohibiting some classes of structures if their adverse effects on those values cannot otherwise be avoided, remedied or mitigated.
- (c) Rules that control the effects of coastal discharges on natural habitats, plants and animals.
- (d) Rules provide for the removal of unauthorised, abandoned, obsolete or redundant structures.

(e) Rules that encourage the establishment of moorings within a Mooring Area.

....

### **21.1.30 Principal Reasons and Explanation**

Physical modification to the coastal marine area by disturbances, structures, reclamation or other works can adversely affect the natural character of the coastal marine area and adjoining coastal land. The functioning of natural coastal processes and areas of natural value, including natural habitats of plants and animals, may be adversely affected. The Act and the New Zealand Coastal Policy Statement require the preservation of the natural character of the coastal environment, including the coastal marine area, as a matter of national importance. They also require the healthy functioning of coastal marine ecosystems. It is necessary to control the location, scale or form of such activities to ensure that they are appropriate uses of the coastal marine area. Stock may damage or alter the plant and animal communities that contribute to the natural character of coastal margins, especially the margins of estuaries.

....

## **21.2 Protection of Habitats and Ecosystems**

### **21.2.1 Issue**

The protection of coastal marine habitats and ecosystems from the damaging effects of disturbances, discharges, structures, or the introduction of animals or plants, or passage of vessels, vehicles, people or animals.

### **21.2.2 Objective**

Avoidance, remediation, or mitigation of adverse effects on marine habitats and ecosystems caused by:

- (a) access by vessels, vehicles, people, or animals;
- (b) the introduction of species non-indigenous to the District;
- (c) disturbance of the foreshore or seabed;
- (d) the placement and use of structures for port, berthage, aquaculture, network utilities, roads, mineral extraction or any other purpose;
- (e) the disposal of contaminants or waste, or accidental spillage of substances;

with priority for avoidance in those areas having nationally or internationally important natural ecosystem values.

### 21.2.3 Policies

*Refer to Rule sections 25.1 – 25.5.*

- 21.2.3.1** To assess existing unauthorised structures or works in the coastal marine area and either require their authorisation or removal after considering the significance of the effects of such structures or works on:
- (a) natural character;
  - (b) natural coastal processes and patterns;
  - (c) coastal habitats and ecosystems, particularly those supporting rare or endangered indigenous or migratory species, or nationally or internationally significant natural ecosystems;
  - (d) public access to coastal marine space;
  - (e) visual amenity and landscapes or seascapes;
  - (f) navigational safety;
  - (g) historic and cultural values.
- 21.2.3.2** To allow navigational aids necessary for the efficient achievement of safe navigation throughout the coastal marine area, and to protect them from adverse effects of other activities.
- 21.2.3.3** To avoid, remedy or mitigate adverse effects of structures or works in the coastal marine area, for any purpose, on:
- (a) natural character;
  - (b) natural coastal processes and patterns;
  - (c) coastal habitats and ecosystems, particularly those supporting rare or endangered indigenous or migratory species, or nationally or internationally significant natural ecosystems;
  - (d) public access to coastal marine space;
  - (e) visual amenity and landscapes or seascapes;
  - (f) navigational safety;
  - (g) historic and cultural values.
- 21.2.3.4** To require that utility structures or facilities in the coastal marine area are proposed only after a comparative evaluation is undertaken of the effects of alternative sites or routes for such utilities, including on land not in the coastal marine area.

- 21.2.3.5** To avoid, remedy or mitigate adverse effects from the maintenance, replacement or protection of utility structures or facilities, including roading structures, wharves, or jetties, in the coastal marine area.
- 21.2.3.6** ~~Require the removal or remove unauthorised, abandoned, obsolete or redundant structures adversely affecting marine habitat or ecosystems except where removal would have adverse effects on the environment or where the structure has heritage or cultural values. To require the removal of disused or obsolete structures except where removal would have adverse effects on the environment or where the structure is registered under the Historic Places Act 1993.~~
- 21.2.3.7** To prevent authorisation for any structure or work in the coastal marine area for or in conjunction with the harvesting or enhancement of any plant or animal, from being implemented, unless and until the fisheries purpose for which such structure or work is required has been authorised under the relevant Fisheries Act.
- 21.2.3.8** To avoid, remedy or mitigate adverse effects of beach grooming or replenishment, particularly on public access, amenity values, coastal processes, ecosystems, habitats and lawful structures.
- 21.2.3.9** To enable the excavation or removal of foreshore or seabed material for marine mammal rescue or burial.
- 21.2.3.10** To allow the use of the foreshore where there are no adverse effects on:
- (a) public access and safety;
  - (b) amenity values;
  - (c) plants, animals or habitats;
  - (d) natural features and processes;
  - (e) existing authorised structures.
- 21.2.3.11** To allow temporary exclusion of the public from specified parts of the coastal marine area for military training activities, subject to any other adverse effect of the activities being avoided, remedied or mitigated.
- 21.2.3.12** To prevent structures or works on the foreshore and intertidal flats within and adjacent to the Farewell Spit Nature Reserve, except in relation to marine mammal rescue or burial.
- 21.2.3.13** To avoid adverse effects on, and support the protection of, the bryozoan coral beds adjacent to Separation Point/Te Matau.
- 21.2.3.14** To avoid, remedy or mitigate adverse effects of structures (including moorings) in the coastal marine area between Tata Islands and Toko Ngawa Point.
- 21.2.3.15** To retain the open space of Kaiteriteri Bay without further structures other than the existing boat ramp, swimming platform and moorings within the identified locations of the Mooring Areas at Kaiteriteri Bay of the Kaiteriteri Recreation Reserve Board.
- 21.2.3.16** To confine port activities and facilities to existing port locations, unless sites with less adverse environmental effects from such activities can be demonstrated.

- 21.2.3.17** To promote measures to re-establish natural coastal conditions or processes.
- 21.2.3.18** To limit the number, location, and scale of structures in the coastal marine area adjoining the Abel Tasman National Park in accordance with the following:
- (a) one public mooring at each of Tata Islands, Mutton Cove, and Taupo Point;
  - (b) two boat ramps at Totaranui;
  - (c) ~~a water pipe at Bark Bay;~~
  - (d) ~~a jetty for public use at Torrent Bay/Rākauroa; Structures listed in Schedule 25A~~
  - (e) ~~swing Mmoorings (excluding pile moorings) will be allowed only~~ in association with an interest in a land title at Boundary Bay, Torrent Bay/Rākauroa, or Astrolabe Roadstead, and only to the extent that the cumulative effect of moorings at each location is not adverse;
  - (f) swing moorings at The Anchorage are limited to one for each private property at The Anchorage (as at 25 May 1996), plus one other existing mooring.
  - (g) structures or moorings will not be allowed adjacent to Adele/Motuareronui or Fisherman's island.
- 21.2.3.19** To enable instruments and materials to be deployed in the coastal marine area for scientific investigations, subject to any adverse effects being avoided, remedied or mitigated.
- 21.2.3.20** To regard reclamation as generally inappropriate, and ensure that any reclamation:
- (a) is for a purpose that functionally must be located on the coast and in the coastal marine area;
  - (b) is of the minimum practical extent for the proposed purpose and adequate management of any adverse effects arising from that purpose, and for any area needed for public access;
  - (c) avoids locating in areas with nationally or internationally important natural ecosystem value, unless there is no feasible alternative location for the activity for which reclamation is sought.
- 21.2.3.21** To restrict structures and disturbance such as port developments, jetties, moorings or aquaculture from locating in areas where they would adversely affect nationally or internationally significant natural ecosystem values or significant habitats such as estuaries and intertidal areas.
- 21.2.3.22** To protect the margins of the coastal marine area from damage by stock.
- 21.2.3.23** To provide for consistent protection for coastal habitats and ecosystems across the line of mean high water springs, where the natural habitat of species crosses this line.
- 21.2.3.24** To eradicate invasive non-indigenous species where practicable and protect coastal marine habitats and ecosystems from invasion by non-indigenous species.
- 21.2.3.25** To encourage the re-establishment of species indigenous to the coastal marine area.

21.2.3.26 To avoid, remedy or mitigate adverse effects of vehicles in estuarine areas.

## 21.2.20 Methods of Implementation

### 21.2.20.1 Regulatory

- (a) Rules that control disturbances, structures or other works that interfere with or limit the movement of coastal water or that involve the excavation or removal of material.
- (b) Rules that limit the number, location, and scale of structures in the coastal marine area adjoining the Abel Tasman National Park in accordance with the following:
  - ~~\_\_\_\_\_ (i) one public mooring at each of the Tata Islands, Mutton Cove, and Taupo Point;~~
  - ~~\_\_\_\_\_ (ii) two boat ramps at Totaranui;~~
  - ~~\_\_\_\_\_ (iii) a water pipe at Bark Bay;~~
  - ~~\_\_\_\_\_ (iv) a jetty for public use at Torrent Bay/Rākauroa; Structures listed in Schedule 25A~~
  - ~~\_\_\_\_\_ (v) swing-Moorings (excluding pile moorings) will be allowed only in association with an interest in a land title at Boundary Bay, Torrent Bay/Rākauroa, The Anchorage or Astrolabe Roadstead, and only to the extent that the cumulative effect of moorings at each location is not adverse;~~
  - ~~\_\_\_\_\_ (vi) structures or moorings will not be allowed adjacent to Adele/Motuareronui or Fisherman's island.~~

....

### 21.2.20.2 Investigations and Monitoring

- (a) Assessment of all existing structures in the coastal marine area and establishment of their authorisation or other status.
- (b) Recording of all new coastal structures for notification to the New Zealand Hydrographic Authority, Land Information New Zealand~~Navy Hydrographer~~.
- (c) Programme for monitoring the effects of activities such as disturbances, structures and discharges on coastal marine habitats and ecosystems.
- (d) Investigation of the closure on any unformed legal roads currently located in the coastal marine area and consultation with affected landowners and other parties.

~~....~~



### 21.2.30 Principal Reasons and Explanation

Disturbances, structures, works or occupation of the coastal marine area for these or other activities can have a range of adverse effects, including effects on natural habitats and marine life, coastal marine ecosystems, natural coastal processes, public access, visual effects, and other effects, such as adverse effects on amenity or cultural values of sectors of the community. The Act and the New Zealand Coastal Policy Statement require such adverse effects to be avoided, remedied or mitigated. Regulating these activities because of their adverse effects is necessary and appropriate.

Some activities may require restrictions on public access for public safety and security reasons, including defence purposes.

~~The New Zealand Coastal Policy Statement requires Council to include in its coastal plan a provision for the Navy Hydrographer to be advised of new structures and works in the coastal marine area.~~

...

## 21.3 Protection of Landscapes, Seascapes and Natural Features

### 21.3.1 Issue

The appropriate form, scale or location of use or development in the coastal marine area that protects landscapes, including surface and underwater seascapes and natural features.

### 21.3.2 Objective

Maintenance of the natural character and landscape of the coastal marine area.

### 21.3.3 Policies

*Refer to Rule sections 25.1 – 25.5.*

**21.3.3.1** ~~To allow~~ Allow Moorings Areas, and structures and structures or physical modifications in the coastal marine area only where the effect on the natural components of landscape and seascape values of the area, including any contribution to any likely cumulative effect, is limited in extent and is consistent with the existing degree of landscape and seascape modification.

**21.3.3.2** Require the removal or remove unauthorised, abandoned, obsolete or redundant structures adversely affecting natural features or landscape except where removal would have adverse effects on the environment or where the structure has heritage or cultural values.

## 21.3.20 Methods of Implementation

### 21.3.20.1 *Regulatory*

- (a) Rules that avoid, remedy or mitigate adverse effects of disturbance, structures or works on landscape values in the coastal marine area.
- (b) Rules that regulate the removal of unauthorised, abandoned, obsolete or redundant structures adversely affecting natural feature or landscape

### 21.3.20.2 *Investigations and Monitoring*

- (a) Identification of areas where open space values are to be protected.

....

## 21.5 Protection of Cultural Heritage Values

...

### 21.5.20.2 *Education and Advocacy*

- (a) Advise the New Zealand Hydrographic Authority, Land Information New Zealand ~~New Zealand Hydrographic Office~~ of any heritage resource which may be a danger to navigation.

## 21.6 Effects of Public Access

### 21.6.1 Issue

Public access to the coastal marine area may be restricted by private occupation, and public or private access may adversely affect natural character, ecosystems, heritage and amenity values.

## 21.6.2 Objective

Maintenance and enhancement of public access in the coastal marine area, including public passage or navigation:

- (a) while preserving natural character, and maintaining ecosystems, heritage, and amenity values; and
- (b) without undue hazard or loss of enjoyment as a result of private occupation or use of coastal marine space.

## 21.6.3 Policies

*Refer to Rule sections 25.1 – 25.5.*

**21.6.3.1** To avoid, remedy or mitigate adverse effects of facilities for access to and from the coastal marine area.

**21.6.3.2** To avoid, remedy or mitigate adverse effects of private occupation of space in the coastal marine area, having regard to the common right of public access to or in that area and the functional need for the occupation in the coastal marine area.

**21.6.3.3** Public access in the coastal marine area will be restricted only where necessary to:

- (a) protect areas of significant indigenous vegetation and significant habitats of indigenous fauna;
- (b) protect cultural and spiritual values of the tangata whenua;
- (c) protect public health and safety;
- (d) ensure consistency consistent with the purpose of a resource consent;

or other exceptional circumstances.

21.6.3.# ~~Require the removal or remove unauthorised, abandoned, obsolete or redundant structures adversely affecting public access except where removal would have adverse effects on the environment or where the structure has heritage or cultural values.~~

21.6.3.# ~~Enable Mooring Area, and public and multi-use structures to establish, in appropriate locations, where the structures will enhance public access to and along the coastal marine area.~~

## 21.6.20 Methods of Implementation

### 21.6.20.1 Regulatory

- (a) Rules that prohibit structures that would prevent public access in areas of significant natural value, including estuaries, tidal flats, inshore areas and offshore areas supporting significant coastal marine habitats, except where structures are necessary to protect natural heritage, cultural and spiritual values of the tangata whenua, public health and safety, some scientific purposes and to ensure security consistent with the purpose of a resource consent.

- (b) Rules that prevent private occupation that impedes public access across the foreshore.
- (c) Rules that prohibit occupation by structures where their adverse effects on natural character, natural ecosystems and public interest, cannot otherwise be avoided, remedied or mitigated.
- (d) ~~Harbour bylaw~~ Bylaw provisions that reserve space for uses of craft, vessels or other activities on the surface of coastal waters, and that prohibit activities in certain locations.
- (e) ~~Harbour bylaw~~ Bylaw provisions that allow occupation and use of areas for vessels for special occasions.
- (f) Rules that allow the temporary exclusive occupation of space, including temporary structures for military training purposes.
- (g) Rules that regulate the effects of disturbance, structures or occupation on public access in the coastal marine area.
- (h) Rules that regulate the removal of unauthorised, abandoned, obsolete or redundant structures adversely affecting public access.
- (i) —Rules that encourage efficient use of mooring in public space.

....

### 21.6.30 Principal Reasons and Explanation

Access to and occupation of coastal marine space for private or commercial purposes may result in reduced opportunities for the use and enjoyment of that space by others. There is a need to control the uptake of space for such occupations in relation to the effect of loss of access for the public.

In some cases it may be possible to maintain or enhance public access in conjunction with private use of the coastal marine area, including public access over structures authorised for private or commercial purposes.

The New Zealand Coastal Policy Statement specifically recognises the need for public open space within and adjacent to the coastal marine area, for public use and appreciation including active and passive recreation. The New Zealand Coastal Policy Statement also places importance on walking access to and along the coast. ~~The Act and the New Zealand Coastal Policy Statement require maintenance and enhancement of public access to the coastal marine area, and disturbances, structures or other occupations of coastal space need to be controlled to ensure public access is retained as far as practicable.~~

## **21.7 Enhancement of Amenity Values**

### **21.7.1 Issue**

The conflict between the amenity value of the coastal marine area that depends on its natural character, and the cultural or recreational amenity obtained through changes to those natural qualities.

### **21.7.2 Objective**

Maintenance and enhancement of the amenity value derived from the natural character of the coastal marine area.

### **21.7.3 Policies**

*Refer to Rule sections 25.1 – 25.5.*

**21.7.3.1** To avoid, remedy or mitigate the adverse effects of activities in the coastal marine area, including structures for its use and enjoyment, on the amenity values of any part of the coastal marine area or coastal land, particularly on those values dependent on natural character, such as in areas adjacent to national parks, estuaries and open beaches, and taking into account:

- (a) location
- (b) permanence
- (c) size and number
- (d) frequency and duration of use
- (e) need to exclude other activities or people.

### **21.7.20 Methods of Implementation**

#### **21.7.20.1 *Regulatory***

- (a) Rules that regulate the adverse effects of the passage of craft or vehicles across or along the foreshore, particularly in estuaries.
- (b) Rules that regulate the construction, removal, use and maintenance of structures.

(c) Rules that regulate the amenity effects of any disturbances or structures interfering with the movement of coastal water or sediment or involving excavation or removal of material.

(#) Rules that encourage the efficient use of public space.

....

# CHAPTER 25: COASTAL MARINE AREA RULES

## Table of Contents

### 25.1 Structures and Occupation

*Refer to Policy sets 20.1, 21.1 – 21.7, 22.1, 23.1, 24.1.*

#### 25.1.1 Scope of Section

This section deals with occupation and associated structures for a range of purposes, within the coastal marine area. Disturbance relating to aquaculture structures is addressed in Section 25.1. Disturbance relating to other activities in the coastal marine area are dealt with in Section 25.2. Information required with coastal permit applications for occupation or structures is detailed in Chapter 26.

#### 25.1.2 Structures Relating to Craft

##### 25.1.2.1 Permitted Activities (Structures Relating to Craft)

Any structure for the launching, haulout, mooring, berthage, or storage of craft, including launching ramps, slipways, swing or pile moorings, jetties, or boatsheds is a permitted activity that may be undertaken without a resource consent, if it complies with the following conditions:

(a) The activity does not contravene any other applicable rule in Chapter 25 of this Plan;

(b) The activity is the occupation of the coastal marine area by, and use of, ~~one of the following:~~

~~a structure listed in Schedule 25A;~~

~~Any wharf or breakwater that existed on 25 May 1996 at the ports of Mapua, Motueka, Tarkohe, Waitapu, Milnthorpe, Collingwood, and Mangarakau, and is listed in Schedule 25A;~~

(ii) ~~a boat ramp that existed on 25 May 1996 and is listed in Schedule 25A;~~

(iii) ~~a swing mooring that existed on 25 May 1996 in the Mapua Mooring Area and is listed in Schedule 25A;~~

~~(iv) a mooring that existed on 25 May 1996 at Kaiteriteri Bay and is listed in Schedule 25A;~~

~~(v) a jetty or berth that existed on 25 May 1996 at Ligar Inlet, Best Island, Deadman's Island, Jackett's Island, or Collingwood, and is listed in Schedule 25A.~~

- ~~(a) — (vi) a jetty, wharf, boatshed, or boat ramp that existed on 25 May 1996 at Riwaka and is listed in Schedule 25A.~~
- ~~(c) The structure is within 20 metres of a network utility, but does not affect the network utility and the placement of the structure is supervised by a civil or network utility engineer who has established the position of that network utility;~~
- ~~(d) The structure is a mooring in a Mooring Area that is authorised by a Mooring Licence issued under the Council Consolidated Bylaw, Chapter #, provided that:~~
- ~~i. No person lives onboard a craft moored on the mooring for a period exceeding 7 days within any two calendar months;~~
  - ~~ii. No commercial operations are undertaken onboard a craft moored on the mooring.~~
  - ~~iii. Any mooring in Torrent Bay/Rākauroa and Boundary Bay Mooring Area is in association with an interest in a land title at Torrent Bay/Rākauroa, Boundary Bay;~~
- ~~The structure is maintained free of any biosecurity risk organism that is the subject of any declaration, small scale management plan, or regional pest management plan under the Biosecurity Act 1993.~~
- ~~(e) The maintenance, repair or replacement of the structure meets the following conditions (except mooring within a Mooring Area):~~
- ~~(i) There is no change in the character, intensity or scale of the structure;~~
  - ~~(ii) There is no change in the location of the structure;~~
  - ~~(iii) The materials used are similar or the same as previously used for the structure;~~
  - ~~(iv) Where the maintenance, repair or replacement of a structure is within 20 metres of a network utility then the location of the network utility must be established by, and the work supervised by a suitably competent person in civil or network utility engineering.~~
- ~~(f) The owner of the structure provides to the Council their name and contact details.~~
- ~~(g) The structure is maintained free of any biosecurity risk organism that is the subject of any declaration, small scale management plan, or regional pest management plan under the Biosecurity Act 1993.~~

#### **25.1.2.2 Controlled Activities (Structures Relating to Craft)**

Any structure for the launching, haulout, mooring, berthage, or storage of craft, including launching ramps, slipways, swing or pile moorings, jetties, or boatsheds, that does not comply with rule 25.1.2.1, is a controlled activity, if it complies with the following conditions:

- ~~(a) — Occupation of the coastal marine area by, and use of a swing mooring:~~
- ~~(i) — in the Mapua Mooring Area;~~
  - ~~(ii) — at Stephens Bay at least 100 metres seaward of mean high water springs and within a straight line from Anawera Point to the northern headland of Stephens Bay;~~
  - ~~(iii) — at Motueka in the area generally north of the line of the main channel and west of the flood-gated channel;~~
- ~~complies with condition (b).~~



~~(b) In relation to condition (a), there is adequate separation distance between the swing mooring and any other structure to allow swinging room for a vessel without causing a risk of collision.~~

~~(c) The Nautical Advisor, National Topo/Hydro Authority, Land Information New Zealand, is given written advice of the work at the time of commencement and completion.~~

~~**A resource consent is required** and may include conditions on the following matters over which the Council has reserved control:~~

~~(1) Continuing management of the structure.~~

~~(2) The duration of the consent (Section 123 of the Act) and the timing of reviews of conditions and purposes of reviews (Section 128).~~

~~(3) Financial contributions, bonds and covenants in respect of the performance of conditions, and administrative charges (Section 108).~~

### 25.1.2.3 Discretionary Activities (Structures Relating to Craft)

Any structure for the launching, haulout, mooring, berthage, or storage of craft, or yacht or boat club clubrooms, and including launching ramps, slipways, swing or pile moorings, jetties, or boatsheds, that does not comply with rule 25.1.2.2~~1~~, is a discretionary activity, if it complies with the following conditions:

(a) The structure is not sited in any area identified in Schedule 25D, except:

(i) within 200 metres of the breakwaters at Port Tarkohe, as they existed at 31 December 2002;

(ii) within 100 metres of the wharves, jetties, boatramps or slipways at Port Mapua, Port Motueka, Waitapu, Collingwood or Mangarakau, as they existed at 31 December 2002;

(iii) within 75 metres of the public jetty at Torrent Bay/Rākauroa, as it existed at 31 December 2002;

~~(b) The structure is a launching ramp or mooring that is not located within an area reserved for any purpose by the Council Consolidated Bylaw, Chapter 5; and~~

~~(c) The New Zealand Hydrographic Authority, Land Information New Zealand Nautical Advisor, National Topo/Hydro Authority, Land Information New Zealand, is given written advice of the work at the time of commencement and completion.~~

**A resource consent is required.** Consent may be refused or conditions imposed to manage any likely effect of the activity. Council's assessment of an application may include, but is not restricted to, consideration of the following matters:

(1) The purpose of the structure, and the appropriateness of its being located in the coastal marine area, including reasons why any location on dry land is not suitable.

(2) The scale of the structure.

- (3) Structural integrity.
- (4) The effects of the structure and its use, including:
  - (a) effects on the natural character of the coastal environment;
  - (b) effects on the shape of the shoreline (in plan view and profile);
  - (c) effects on the long-term stability of the foreshore or seabed;
  - (d) effects on animal and plant habitats and ecosystems, including effects on the natural ecosystem values of the areas listed in Schedule 25D;
  - (e) the risk of material or contaminants moving or leaching from the structure into any part of the coastal marine area;
  - (f) changes to wave patterns, current flow, sediment transport and deposition, exchange of saltwater and fresh water, nutrient transfer, or other coastal processes;
  - (g) navigational safety;
  - (h) public access;
  - (i) access for other authorised activities;
  - (j) amenity values of the locality;
  - (k) efficiency of the use of space for the structure;
  - (l) effects of the existence and use of the structure on landscape and seascape values and visual amenity;
  - (m) effects during the construction, continued existence, maintenance and use of the structure;
  - (n) any likely adverse effects from the removal of any existing structure;
  - (o) effects on water quality.
  - (p) effects on any network utility.
  - (q) effects on any heritage or cultural value.
- (5) Measures to avoid, remedy, or mitigate any identified adverse effects of the structure.
- (6) Circumstances where removal of the structure will be required.
- (7) The duration of the consent (Section 123 of the Act) and the timing of reviews of conditions and purpose of reviews (Section 128).
- (8) Financial contributions, bonds and covenants in respect of the performance of conditions, and administrative charges (Section 108).

- ....
- (#) Living onboard any craft
  - (#) Any declaration, small scale management plan, or regional pest management plan under the Biosecurity Act 1993

- (11) In addition to the above inIn relation to ~~swing or pile~~ moorings, the following:
- (a) relationship with tenure, use and character of land in the vicinity;
  - (b) permanence, or ease of removal;
  - (c) intended duration or frequency of use, including seasonal or intermittent use.
  - (d) effect of the mooring type on the environment

....

#### **25.1.2.4 Non-Complying Activities (Structures Relating to Craft)**

Any structure for any of the purposes specified in rule 25.1.2.3, that does not comply with the conditions of that rule, is a non-complying activity.

**A resource consent is required.** Consent may be granted and conditions imposed, or consent may be refused.

....

#### **25.1.5.5 Permitted Activities (Disturbance or Occupation of the Coastal Marine Area)**

Any disturbance or occupation in the coastal marine area resulting from the maintenance, repair, replacement or reconstruction of any structure or work that is:

- (i) for the purpose of avoiding or mitigating effects of erosion or inundation; or
- (ii) part of a road, including any bridge, culvert or protection work;

is a permitted activity that may be undertaken without a resource consent, if it complies with the following conditions:

- (a) The activity does not contravene any other applicable rule of this Plan.
- (b) The activity relates to an authorised structure or work.
- (c) There is no alternative location from which the activity can be carried out.
- (d) Disturbance is confined to the smallest practicable area and does not cause significant habitat damage.

- (e) The activity avoids further restriction to tidal flushing and fish passage.
- (f) Vehicle movement in the coastal marine area is avoided wherever practicable and otherwise:
  - (i) avoids unnecessary disturbance;
  - (ii) traverses hard substrate wherever practicable;
  - (iii) avoids indigenous vegetation wherever practicable.
- (g) Within seven days of the work being completed, the natural levels of the foreshore and seabed are reinstated as close as practicable to those which existed prior to the activity commencing.

#### **25.1.5.7 Permitted Activities (Removal of Structures)**

Any disturbance of the coastal marine area by or in connection with the removal of a structure from the coastal marine area is a permitted activity that may be undertaken without resource consent, if it complies with the following conditions:

(a) The removal is undertaken by or on behalf of:

- (i) the owner of the structure;
- (ii) the Council; or
- (iii) the Crown.

(b) The area of disturbance does not exceed the minimum practical footprint required for access and removal;

(c) Any damage to animal or plant communities does not exceed the minimum practical footprint required for access and removal or have any significant adverse effects on aquatic life;

(d) The foreshore or seabed disturbed during the removal of the structure is restored as close as practicable to the local undisturbed condition within 2 days following removal;

(e) Any person who intends to remove a structure must provide the following information to the Environment and Planning Manager of Council [before the removal takes place](#):

- (i) a description of the structure and how it is proposed to be removed;
- (ii) the date of removal;
- (iii) the expected duration required to remove the structure;
- (iv) the location co-ordinates of the structure to be removed;
- (v) how the structure will be disposed of; and
- (vi) who will be undertaking the work.

(f) The structure is not recorded on the New Zealand Heritage List (in accordance with the Heritage New Zealand Pouhere Taonga Act 2014) or [listed in Schedule 16.13](#);

(g) Navigation safety will not be adversely affected during the removal of the structure;

(h) Existing Network Utilities will not be adversely affected during the removal of the structure.

(i) Where the structure to be removed is marked on a hydrographic chart, the New Zealand Hydrographic Authority, Land Information New Zealand, is given written advice of the work before removal.

....

## **25.1.5 Other Structures or Occupation**

### **25.1.5.1 Permitted Activities (Disturbance or Occupation for Lines or Cables)**

Any disturbance or occupation of the coastal marine area for the installation, use, maintenance or replacement of submarine lines or cables is a permitted activity that may be undertaken without a resource consent, if it complies with the following conditions:

- (a) The activity does not contravene any other applicable rule in Chapter 25 of this Plan.
- (b) The line or cable is completely and permanently buried under foreshore or seabed.

(c) The line or cable is buried by mole plough or water blasting.

(d) The site is reinstated within 72 hours.

~~(e) Disturbance or occupation within 20 metres of a network utility does not affect the network utility and the placement of the structure is supervised by a civil or network utility engineer who has established the position of that network utility;~~

...

#### 25.1.5.5 Permitted Activities (Disturbance or Occupation of the Coastal Marine Area)

Any disturbance or occupation in the coastal marine area resulting from the maintenance, repair, replacement or reconstruction of any structure or work that is:

~~(ia)~~ for the purpose of avoiding or mitigating effects of erosion or inundation; or

~~(ib)~~ part of a road, including any bridge, culvert or protection work;

is a permitted activity that may be undertaken without a resource consent, if it complies with the following conditions:

~~(g)(i)~~ The activity does not contravene any other applicable rule of this Plan.

~~(h)(j)~~ The activity relates to an authorised structure or work.

~~(i)(k)~~ There is no alternative location from which the activity can be carried out.

~~(j)(l)~~ Disturbance is confined to the smallest practicable area and does not cause significant habitat damage.

~~(k)(m)~~ The activity avoids further restriction to tidal flushing and fish passage.

~~(l)(n)~~ Vehicle movement in the coastal marine area is avoided wherever practicable and otherwise:

(i) avoids unnecessary disturbance;

(ii) traverses hard substrate wherever practicable;

(iii) avoids indigenous vegetation wherever practicable.

~~(o) ~~(g)~~ Within seven days of the work being completed, the natural levels of the foreshore and seabed are reinstated as close as practicable to those which existed prior to the activity commencing.~~

~~(p) That disturbances or occupations within 20 metres of a network utility does not affect the network utility and the placement of the structure is supervised by a civil or network utility engineer who has established the position of that network utility;~~

...

### 25.1.5.7 Controlled Activities (Other Structures or Occupation)

Any disturbance or occupation of the coastal marine area by or in connection with the use, maintenance, repair, replacement or removal of any pipe, discharge outfall structure, navigation aid, overhead line or with the upgrading of any overhead line, is a controlled activity, if it complies with the following conditions:

- (a) The activity does not include the construction or installation of any facility in a new location.
- (b) The activity does not involve any additional support structure.
- (c) The location, type, and need for any navigation aid has been approved by [the Maritime Transport Authority under the Maritime Transport Act 1994](#) ~~Minister of Transport under Section 203 of the Harbours Act 1950.~~

**A resource consent is required** and may include conditions on the following matters over which the Council has reserved control:

- (1) Matters (3) to (8) specified in rule 25.1.2.3.
- (2) Measures to avoid, remedy, or mitigate any identified adverse effects of the activity.
- (3) In relation to navigation aids, the following additional matters:
  - (a) any loss of amenity as a result of the location, type and use of the navigation aid;
  - (b) the effectiveness of the navigation aid as a result of the actual or potential use or development of any land.
- (3) In relation to navigation aids, the following additional matters:
  - (a) any loss of amenity as a result of the location, type and use of the navigation aid;
  - (b) the effectiveness of the navigation aid as a result of the actual or potential use or development of any land.
- (4) In relation to structures for the purpose of mitigating coastal erosion or inundation, the following additional matters:
  - (a) the design and appearance of the structure, including its profile;
  - (b) materials used in relation to adjoining foreshore material;
  - (c) likely effectiveness of the structure; and
  - (d) the avoidance, remedying, or mitigation of any adverse effect.

...

## 25.1.20 Principal Reasons for Rules

### *Structures for Launching, Haulout, Mooring, Berthage or Storage of Craft or Vessels*

The District contains several existing structures that have no current authorisation – because none were needed previously, or consent requirements were not administered. Those existing unauthorised structures that have no adverse effects have been given permitted activity status, subject to a condition relating ~~to to their structural integrity and the provision of the owners name and contact details to Council~~. Consent needs to be obtained for other unauthorised structures if adverse effects can be adequately managed; otherwise the structures need to be removed. Where coastal structures are abandoned and no owner can be found then under the Marine and Coastal Area Act 2011 the Crown (Department of Conservation) is deemed to be the owner and the structure can be removed. Council can also remove some abandoned structures where the structure is considered to be of minimal value and the owner cannot be found. All new structures require consent, which will not be granted unless adverse effects can be avoided, remedied or mitigated.

...

## 25.2.3 Disturbance of Foreshore or Seabed

### 25.2.3.2 Discretionary Activities (Disturbance of Foreshore or Seabed – Other Purposes)

Any disturbance of the foreshore or seabed involving the excavation, deposition, redistribution or removal of material for any purpose other than those specified in rules 25.1.3.1, 25.1.3.2, 25.1.4.1 to 25.1.4.6, 25.1.5.1, 25.1.5.2, 25.1.5.4 to 25.1.5.8 or 25.2.3.1 25.1.6# is a discretionary activity, if it complies with the following conditions:

- (a) The activity does not take place in any area identified in Schedule 25D except:
  - (i) within 200 metres of the breakwaters at Port Tarkohe, as they existed at 31 December 2002;
  - (ii) within 100 metres of the wharves, jetties, boatramps or slipways at Port Mapua, Port Motueka, Waitapu, Collingwood or Mangarakau, as they existed at 31 December 2002;
  - (iii) within 75 metres of the public jetty at Torrent Bay/Rākauroa, as it existed at 31 December 2002;
- (b) The ~~New Zealand Hydrographic Authority, Land Information New Zealand Nautical Advisor, National Topo/Hydro Authority, Land Information New Zealand~~, is given written advice of the work at the time of commencement and completion.

....

### 36.2.2.# Permitted Activities (Discharge arising from the removal of coastal structures)

The discharge of any contaminant into coastal water arising from the removal of a coastal structure is a permitted activity, if it complies with the following conditions:



(a) None of the following effects are likely to arise in the receiving waters, after reasonable mixing:

(i) the production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;

(ii) any conspicuous change in the colour or visual clarity of the receiving water 12 hours following the removal of the structure;

**Note:** A change in colour or clarity of more than 10 percent is generally discernible by observation. A change of 20 percent can be considered a conspicuous change and is easily visible.

(iii) any emission of objectionable odour;

(iv) any discernible change to any habitat by deposition of sediment onto the coastal marine area; or

(v) any significant adverse effects on aquatic or bird life.



Schedule 25B:

Mapua Mooring Area [Able TDC Intranet.url](http://AbleTDCIntranet.url)

## SCHEDULES

### Schedule 25A: Coastal Structures Permitted by Rule 25.1.2.1

STRUCTURE	LOCATION	DESCRIPTION	POSITION (NZTM)		POSITION (WGS 84) ①		ID ②	PHOTO ③
			EASTING	NORTHING	EASTING	NORTHING		
<b>(i) Wharves and Breakwaters</b>								
1	Mapua	Seaward end of floating wharf	<a href="#">173.1023385</a>	<a href="#">-41.2562993</a>	1608573.4	5432785.6	62(a)	
2		Mid-length of main wharf	<a href="#">173.1021478</a>	<a href="#">-41.2565336</a>	1608557.4	5432759.6	62(b)	
3	Motueka	Mid-length of main wharf	<a href="#">173.0226082</a>	<a href="#">-41.1386206</a>	1601897.4	5445854.3		
4	Tarakohe	Western breakwater, outer end	<a href="#">172.8930088</a>	<a href="#">-40.8211596</a>	1590977.6	5481090.1		
5		Eastern breakwater, outer end	<a href="#">172.8941353</a>	<a href="#">-40.8204048</a>	1591072.5	5481174.0		
6		Southern wharf, mid-length	<a href="#">172.8981023</a>	<a href="#">-40.8232893</a>	1591407.4	5480854.2		
7		Northern wharf, mid-length	<a href="#">172.8974988</a>	<a href="#">-40.8224429</a>	1591356.4	5480948.1		
8	Waitapu	North-east corner of wharf	<a href="#">172.8084642</a>	<a href="#">-40.8228618</a>	1583848.5	5480889.0	161	161a
9	Milnthorpe	Eastern corner of wharf	<a href="#">172.6846290</a>	<a href="#">-40.7170426</a>	1573363.7	5492605.3	214	214a 215a
10	Collingwood	Mid-length of wharf	<a href="#">172.6791298</a>	<a href="#">-40.6789657</a>	1572883.8	5496830.3	197	197a
11	Mangarakau	North-east end of derelict wharf structure	<a href="#">172.5239085</a>	<a href="#">-40.6221127</a>	1559732.1	5503081.7	237	237a
<b>(ii) Boat Ramps</b>								
1	Best Island	West of jetty	<a href="#">173.1613927</a>	<a href="#">-41.3012220</a>	1613511.4	5427791.0	40	40a
2	Rough Island	Hunter Brown Reserve	<a href="#">173.1075613</a>	<a href="#">-41.2689829</a>	1609009.2	5431377.0		
3	Rabbit Island/ Moturoa	Ski-lane ramp	<a href="#">173.1511199</a>	<a href="#">-41.2835410</a>	1612654.8	5429755.4		
4	Mapua	Adjoining wharf	<a href="#">173.1020280</a>	<a href="#">-41.2562004</a>	1608547.4	5432796.6	63	
5		Grossi Point	<a href="#">173.0987782</a>	<a href="#">-41.2613359</a>	1608274.5	5432226.8		
6	Kina	Baigent's Reserve	<a href="#">173.0398101</a>	<a href="#">-41.1635951</a>	1603339.8	5443081.3		
7	Motueka	East of main wharf	<a href="#">173.0239663</a>	<a href="#">-41.1379267</a>	1602011.4	5445931.3		
8		Peninsula	<a href="#">173.0204166</a>	<a href="#">-41.1374319</a>	1601713.5	5445986.3		
9	Riwaka	End of Green Tree Road	<a href="#">173.0069527</a>	<a href="#">-41.0716890</a>	1600584.1	5453284.7	362	
10	Kaiteriteri		<a href="#">173.0195796</a>	<a href="#">-41.0352000</a>	1601645.8	5457335.2	318	318a
11	Otuwhero	Estuary	<a href="#">173.0075894</a>	<a href="#">-41.0090957</a>	1600638.2	5460233.2		
12		Beach	<a href="#">173.0090627</a>	<a href="#">-41.0081956</a>	1600762.1	5460333.1		
13	Totaranui	Beach	<a href="#">173.0060332</a>	<a href="#">-40.8181461</a>	1600508.8	5481430.1	187	187a, 187b



Able TDC Intranet.url

Schedule 25B:

Mapua Mooring Area

STRUCTURE	LOCATION	DESCRIPTION	POSITION (NZTM)		POSITION (WGS 84) ①		ID ②	PHOTO ③
			EASTING	NORTHING	EASTING	NORTHING		
14	Totaranui	Estuary	<u>173.0055589</u>	<u>-40.8176957</u>	1600468.8	5481480.4	188	188a, 188b
15	Tata Beach		<u>172.9147836</u>	<u>-40.8115242</u>	1592812.8	5482161.7	186	186a
16	Tarakohe		<u>172.8942731</u>	<u>-40.8232588</u>	1591084.5	5480857.2		
17	Waitapu		<u>172.8075846</u>	<u>-40.8239864</u>	1583774.6	5480764.0		
18	Rangihaeata		<u>172.7889710</u>	<u>-40.8059900</u>	1582200.2	5482758.4	180	180a
19	Onekaka		<u>172.7093369</u>	<u>-40.7479647</u>	1575461.9	5489180.0		
20	Collingwood		<u>172.6805998</u>	<u>-40.6756915</u>	1573006.7	5497194.2	195	
21	Mangarakau	Adjoining derelict wharf	<u>172.5239908</u>	<u>-40.6221671</u>	1559739.4	5503075.7		
<b>(iii) — Swing moorings in the Mapua Mooring Area ④ Public Structures in the Abel Tasman Foreshore Scenic Reserve and Coastal Marine Area</b>								
4					1608507.4	5432458.7	61(b1)	
2					1608527.4	5432508.7	61(b2)	
3					1608527.4	5432591.6	61(d)	
4					1608534.4	5432630.6	61(f)	
5					1608575.4	5432570.6	61(g)	
6					1608547.4	5432654.6	61(h)	
7					1608576.4	5432617.6	61(i)	
8					1608544.4	5432693.6	61(j)	
9					1608582.4	5432719.6	61(k)	
10					1608599.4	5432702.6	61(l)	
11					1608615.4	5432737.6	61(m)	
12					1608627.4	5432770.6	61(n)	
13					1608601.4	5432815.6	61(o)	



Able TDC Intranet.url

Schedule 25B:

Mapua Mooring Area

STRUCTURE	LOCATION	DESCRIPTION	POSITION (NZTM)		POSITION (WGS 84) ①		ID ②	PHOTO ③
			EASTING	NORTHING	EASTING	NORTHING		
44					4608646.4	5432798.6	61(p)	
45					4608620.4	5432843.5	61(q)	
46					4608666.4	5432831.5	61(r)	
47					4608676.4	5432895.5	61(s)	
1	<u>Torrent Bay/ Rakauroa</u>	<u>Torrent Bay/Rakauroa Jetty</u>	<u>1604079</u>	<u>5467276</u>	<u>173 02.907651</u>	<u>40 56.738118</u>		
1a	<u>Torrent Bay/Rakauroa</u>	<u>Track markers (Various)</u>	-	-	-	-		
2		<u>Torrent Bay/Rakauroa Finger Jetty</u>	<u>1603974</u>	<u>5467221</u>	<u>173 02.832824</u>	<u>40 56.767876</u>		
3a	<u>Marahau</u>	<u>Causeway Marahau 1</u>	<u>1600414</u>	<u>5461687</u>	<u>173 00.295327</u>	<u>40 59.759566</u>		
3b		<u>Causeway Marahau 2</u>	<u>1600514</u>	<u>5461787</u>	<u>173 00.366660</u>	<u>40 59.705513</u>		
3c		<u>Causeway Marahau 3</u>	<u>1600514</u>	<u>5461887</u>	<u>173 00.366655</u>	<u>40 59.651463</u>		
3d		<u>Causeway Marahau 4</u>	<u>1600514</u>	<u>5461987</u>	<u>173 00.366650</u>	<u>40 59.597414</u>		
3e		<u>Causeway Marahau 5</u>	<u>1600614</u>	<u>5462087</u>	<u>173 00.437979</u>	<u>40 59.543360</u>		
4	<u>Bark Bay</u>	<u>Water Pipe Bark Bay</u>	<u>1604765</u>	<u>5470680</u>	<u>173 03.395087</u>	<u>40 54.898028</u>		
5d		<u>Bark Bay Estuary steps</u>	<u>1604256</u>	<u>5470469</u>	<u>173 03.032507</u>	<u>40 55.012243</u>		
5e		<u>Bark Bay Estuary ramp / steps</u>	<u>1604240</u>	<u>5470497</u>	<u>173 03.021095</u>	<u>40 54.997114</u>		
6	<u>Mosquito Bay</u>	<u>One set of wooden steps</u>	<u>1605012</u>	<u>5470983</u>	<u>173 03.570929</u>	<u>40 54.734167</u>		
8a	<u>Watering Cove</u>	<u>Beach Steps</u>	<u>1604723</u>	<u>5465238</u>	<u>173 03.367651</u>	<u>40 57.839446</u>		
8b		<u>Beach Steps</u>	<u>1604741</u>	<u>5465254</u>	<u>173 03.380478</u>	<u>40 57.830792</u>		
8c	<u>Awaroa</u>	<u>Track markers (various)</u>	-	-	-	-		
<b>(iv) — Swing Moorings at Kaiteriteri, in the Mooring Area defined in the Tasman District Council Navigation Safety Bylaw 1994</b>								
4					4601894.7	5457078.3	381	
2					4601852.7	5457132.3	382	
3					4601793.7	5457123.3	383	
4					4601803.7	5457165.3	384	
5					4601799.7	5457213.3	385	
6					4601822.7	5457249.3	386	
<b>(v) Jetty or Berth at Specified Locations</b>								
1	Ligar Inlet	Jetty	<u>172.9099630</u>	<u>-40.8182922</u>	1592407.0	5481410.0	94	94a
2		Pile berth	<u>172.9099394</u>	<u>-40.8182111</u>	1592405.0	5481419.0	90	90a
3		Ramp and slipway	<u>172.9099161</u>	<u>-40.8179499</u>	1592403.0	5481448.0	86	86a



Able TDC Intranet.url

Schedule 25B:

Mapua Mooring Area

STRUCTURE	LOCATION	DESCRIPTION	POSITION (NZTM)		POSITION (WGS 84) ①		ID ②	PHOTO ③
			EASTING	NORTHING	EASTING	NORTHING		
4		Pile berths (3)	<a href="#">172.9099873</a>	<a href="#">-40.8178598</a>	1592409.0	5481458.0	85	85a, 85b
5		Pile berths (4)	<a href="#">172.9100350</a>	<a href="#">-40.8177257</a>	1592413.0	5481472.9	84	84a
6	Best Island	Jetty	<a href="#">173.1617276</a>	<a href="#">-41.3013746</a>	1613539.4	5427774.0	39	39a
7	Deadman's Island	Jetty	<a href="#">173.1521402</a>	<a href="#">-41.2965965</a>	1612737.7	5428305.9		
8	Jackett's Island	Jetty	<a href="#">173.0219418</a>	<a href="#">-41.1411691</a>	1601841.4	5445571.4	112	112a
9	Collingwood	Western jetty adjoining boat ramp	<a href="#">172.6802685</a>	<a href="#">-40.6756816</a>	1572978.7	5497195.2	195(a)	195a
10		Eastern jetty adjoining boat ramp	<a href="#">172.6804690</a>	<a href="#">-40.6758082</a>	1572995.7	5497181.2	195(b)	195b
11	Port Motueka	Yacht Club jetty and berths	<a href="#">173.0198685</a>	<a href="#">-41.1373420</a>	1601667.5	5445996.3	305(b)	
<b>(vi) Jetty or Berth at Riwaka</b>								
1	Riwaka	Jetty	<a href="#">173.0059410</a>	<a href="#">-41.0728592</a>	1600499.1	5453154.8	349	349a, 349b
2		Jetty	<a href="#">173.0060243</a>	<a href="#">-41.0727421</a>	1600506.1	5453167.8	351	351b
3		Jetty	<a href="#">173.0060600</a>	<a href="#">-41.0726971</a>	1600509.1	5453172.8	352	352a
4		Jetty	<a href="#">173.0063457</a>	<a href="#">-41.0723728</a>	1600533.1	5453208.8	354	354a, 354b
5		Jetty	<a href="#">173.0064409</a>	<a href="#">-41.0723007</a>	1600541.1	5453216.8	355	355a, 355b
6		Jetty	<a href="#">173.0065123</a>	<a href="#">-41.0722115</a>	1600547.1	5453226.7	356	356a
7		Jetty	<a href="#">173.0066432</a>	<a href="#">-41.0720313</a>	1600558.1	5453246.7	357	357a, 357b
8		Jetty	<a href="#">173.0067861</a>	<a href="#">-41.0720223</a>	1600570.4	5453247.7	359	359a
9		Jetty	<a href="#">173.0068456</a>	<a href="#">-41.0719953</a>	1600575.4	5453250.7	360	360a
10		Jetty, 120m west of boat ramp	<a href="#">173.0054766</a>	<a href="#">-41.0714999</a>	1600460.4	5453305.7		
11		Jetty, 100m west of boat ramp	<a href="#">173.0056790</a>	<a href="#">-41.0714729</a>	1600477.4	5453308.7		
12		Boatshed	<a href="#">173.0063696</a>	<a href="#">-41.0734898</a>	1600535.4	5453084.8	344	
13		Boatshed	<a href="#">173.0063696</a>	<a href="#">-41.0733997</a>	1600535.4	5453094.8	342	
14		Boatshed, ramp, and jetty	<a href="#">173.0064529</a>	<a href="#">-41.0733366</a>	1600542.4	5453101.8	339	
15		Boatshed	<a href="#">173.0065243</a>	<a href="#">-41.0732646</a>	1600548.4	5453109.8	338	
16		Boatshed	<a href="#">173.0065243</a>	<a href="#">-41.0732015</a>	1600548.4	5453116.8	337	
17		Jetty	<a href="#">173.0064410</a>	<a href="#">-41.0731384</a>	1600541.4	5453123.8	336	
18		Jetty	<a href="#">173.0065600</a>	<a href="#">-41.0730844</a>	1600551.4	5453129.8	335	
19		Jetty	<a href="#">173.0087847</a>	<a href="#">-41.0725528</a>	1600738.0	5453188.8	328	
20		Jetty	<a href="#">173.0088918</a>	<a href="#">-41.0725798</a>	1600747.0	5453185.8	327	
21		Jetty	<a href="#">173.0089752</a>	<a href="#">-41.0725978</a>	1600754.0	5453183.8	326	
22		Jetty	<a href="#">173.0090823</a>	<a href="#">-41.0726248</a>	1600763.0	5453180.8	325	
23		Wharf, mid-length of northern face	<a href="#">173.0093561</a>	<a href="#">-41.0726158</a>	1600786.0	5453181.8	274	
<b>Footnotes:</b>								



[Able TDC Intranet.url](#)

Schedule 25B:

Mapua Mooring Area

STRUCTURE	LOCATION	DESCRIPTION	POSITION (NZTM)		POSITION (WGS 84) ①		ID ②	PHOTO ③
			EASTING	NORTHING	EASTING	NORTHING		
		<p>① <del>Position assessed from aerial photos in Explore Tasman, and generally taken from the seaward end of structures.</del></p> <p>② <del>ID number as in database: Excel Spreadsheet: P:\Environmental Databases\Coastal\Coastal Structures working copy 2004-5.xls.</del></p> <p>③ <del>Photo links are available through Explore Tasman / General / Water / Coastal Structures.</del></p> <p>④ <del>Existing moorings 61(a), (e), (e) and (t) missing from this sequence are outside the mapped boundary of the Mapua Mooring Area.</del></p>						

---

## **Schedule 25B: Mapua Mooring Area**

The Mapua Mooring Area comprises that part of the coastal marine area bounded by mean low water mark adjoining Mapua and a line extended due south from the general line of the western shoreline of the Tahiti Street/Grossi Point peninsula, and continuing generally east and north at a distance of 100 metres from mean high water springs to a point south east of Grossi Point, then generally north to merge with the centreline of the channel between Mapua and Rabbit Island/Moturoa and continuing along that channel centreline to its intersection with a straight line between points 185947 and 188947 (New Zealand Map Grid), then west to mean low water mark.

### **Amend the following maps**

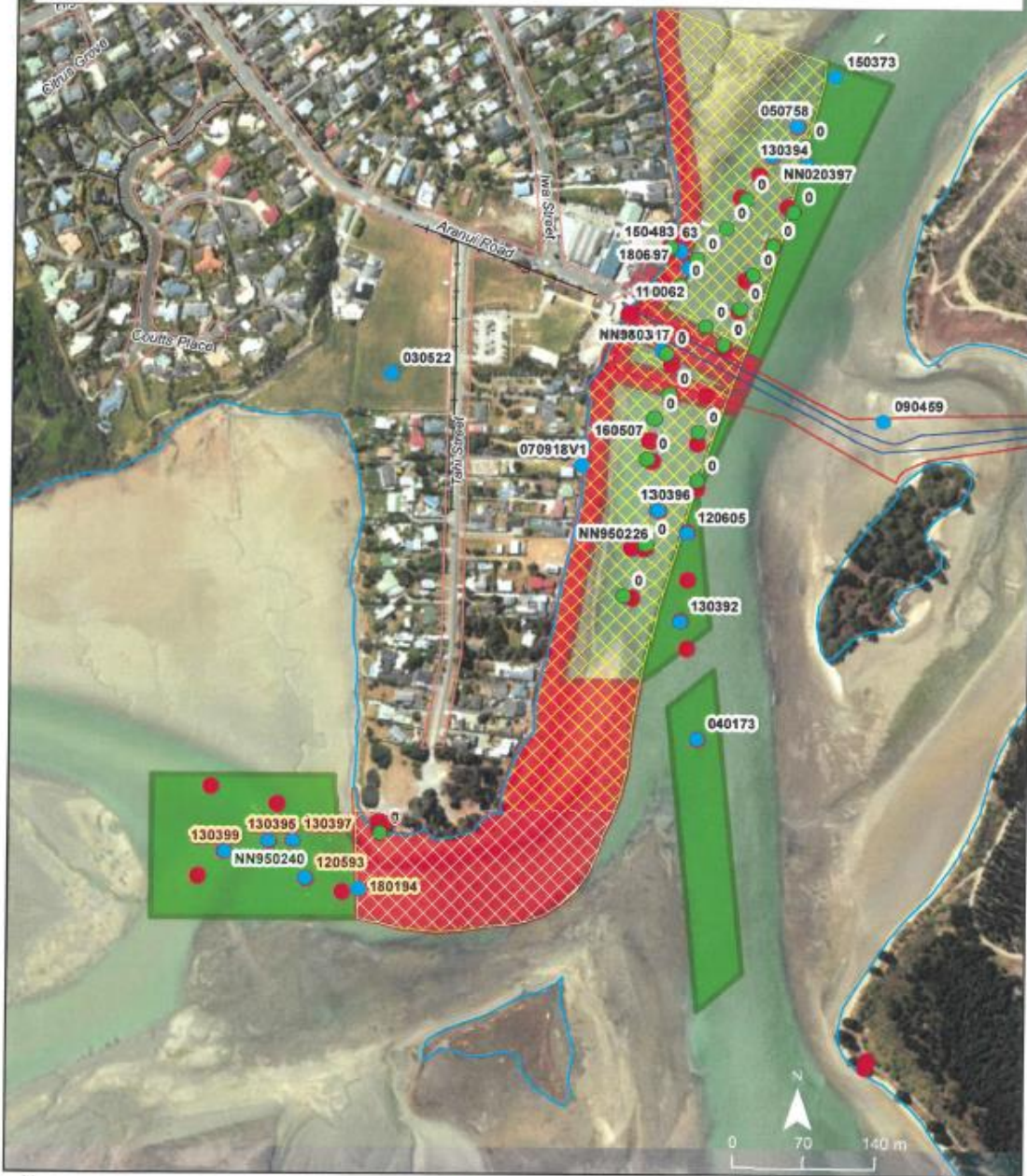
**Delete Map 180 Insert new Map(s) 189+ showing 11 Mooring Area.**

# Review of TRMP Mooring Areas

October 2018

Mapua

Map 1



N  
1:5,000

- Add Mooring Area
- Delete Mooring Area
- Current Mooring Area
- TRMP Coastal Structures
- TRMP and Other Consents
- Confirm Coastal Structures
- 11kV Underground Cable
- Wastewater Pipes
- Water Pipes
- Mean High Water Springs





# Review of TRMP Mooring Areas

October 2018

Motueka 1

Map 2



N  
1:5,500

- |                     |                            |                         |
|---------------------|----------------------------|-------------------------|
| Add Mooring Area    | TRMP Coastal Structures    | 11kV Underground Cable  |
| Delete Mooring Area | TRMP and Other Consents    | Wastewater Pipes        |
|                     | Confirm Coastal Structures | Water Pipes             |
|                     |                            | Mean High Water Springs |
|                     |                            | Current Mooring Area    |



# Review of TRMP Mooring Areas

October 2018

Motueka 2

Map 3



N  
1:5,500

- |   |   |                         |
|---|---|-------------------------|
| <span style="display:inline-block; width:15px; height:15px; background-color:green; border:1px solid black;"></span> Add Mooring Area         | <span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black;"></span> TRMP Coastal Structures | 11kV Underground Cable  |
| <span style="display:inline-block; width:15px; height:15px; background-color:red; border:1px solid black;"></span> Delete Mooring Area        | <span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black;"></span> TRMP and Other Consents | Wastewater Pipes        |
| <span style="display:inline-block; width:15px; height:15px; background-color:red; border:1px solid black;"></span> Confirm Coastal Structures | Water Pipes   | Mean High Water Springs |
|   | Current Mooring Area  |                         |

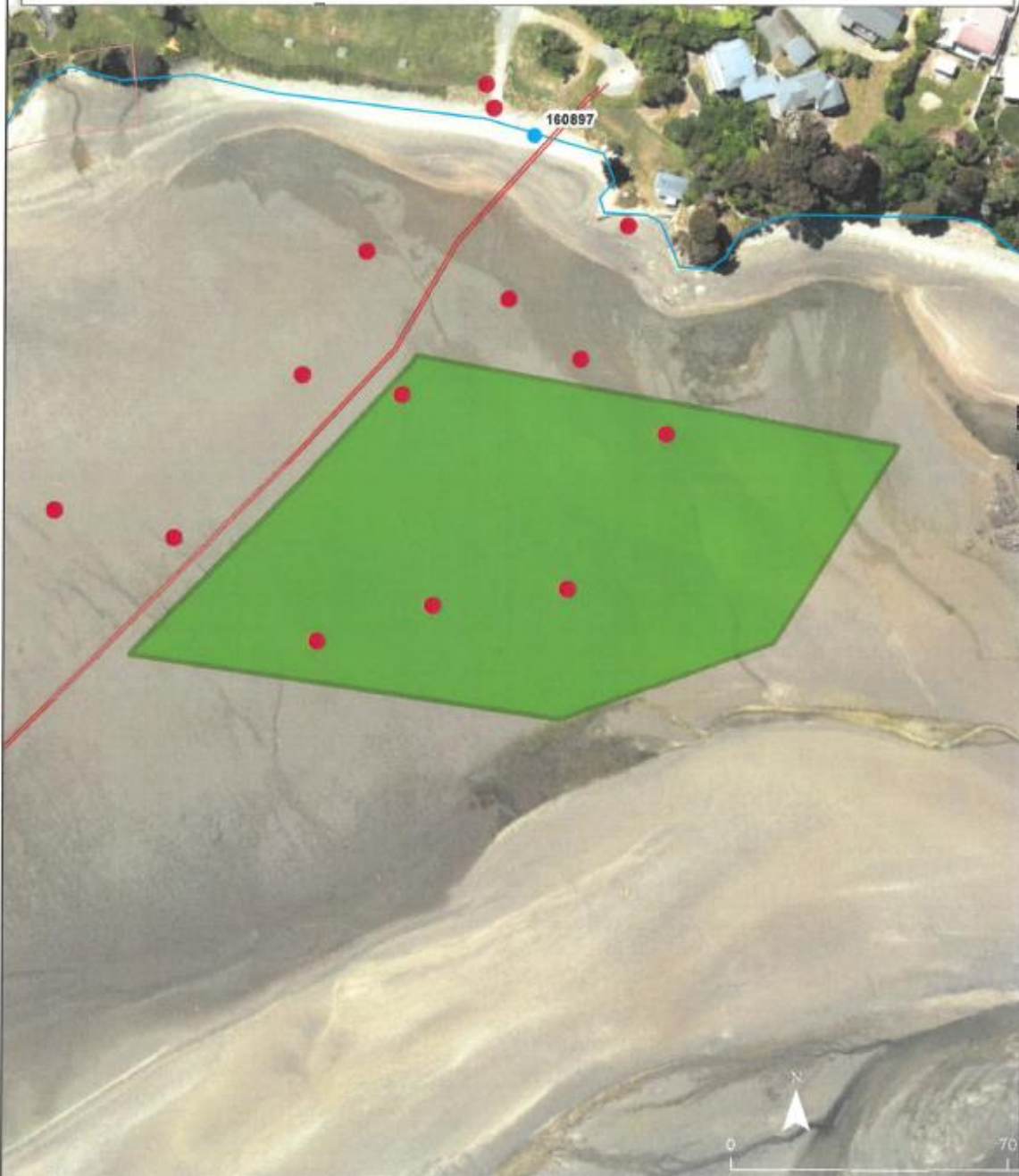


# Review of TRMP Mooring Areas

October 2018

Tapu Bay

Map 4



1:1,300



- |                            |                         |                         |
|----------------------------|-------------------------|-------------------------|
| Add Mooring Area           | TRMP Coastal Structures | 11kV Underground Cable  |
| Delete Mooring Area        | TRMP and Other Consents | Wastewater Pipes        |
| Confirm Coastal Structures | Water Pipes             | Mean High Water Springs |
|                            | Current Mooring Area    |                         |

# Review of TRMP Mooring Areas











October 2018

Stephens Bay

Map 5



N  
1:1,400

- |   |                     |   |                            |  |                         |
|---|---------------------|---|----------------------------|--|-------------------------|
|  | Add Mooring Area    |  | TRMP Coastal Structures    |  | 11kV Underground Cable  |
|  | Delete Mooring Area |  | TRMP and Other Consents    |  | Wastewater Pipes        |
|   |                     |  | Confirm Coastal Structures |  | Water Pipes             |
|   |                     |   |                            |  | Mean High Water Springs |
|   |                     |   |                            |  | Current Mooring Area    |



# Review of TRMP Mooring Areas











October 2018

Kaiteriteri

Map 6



N  
1:1,900

- |  |   |  |
|--|---|--|
|  Add Mooring Area           |  TRMP Coastal Structures |  11kV Underground Cable  |
|  Delete Mooring Area        |  TRMP and Other Consents |  Wastewater Pipes        |
|  Confirm Coastal Structures |  Water Pipes            |  Mean High Water Springs |
|  |  Current Mooring Area   |  |

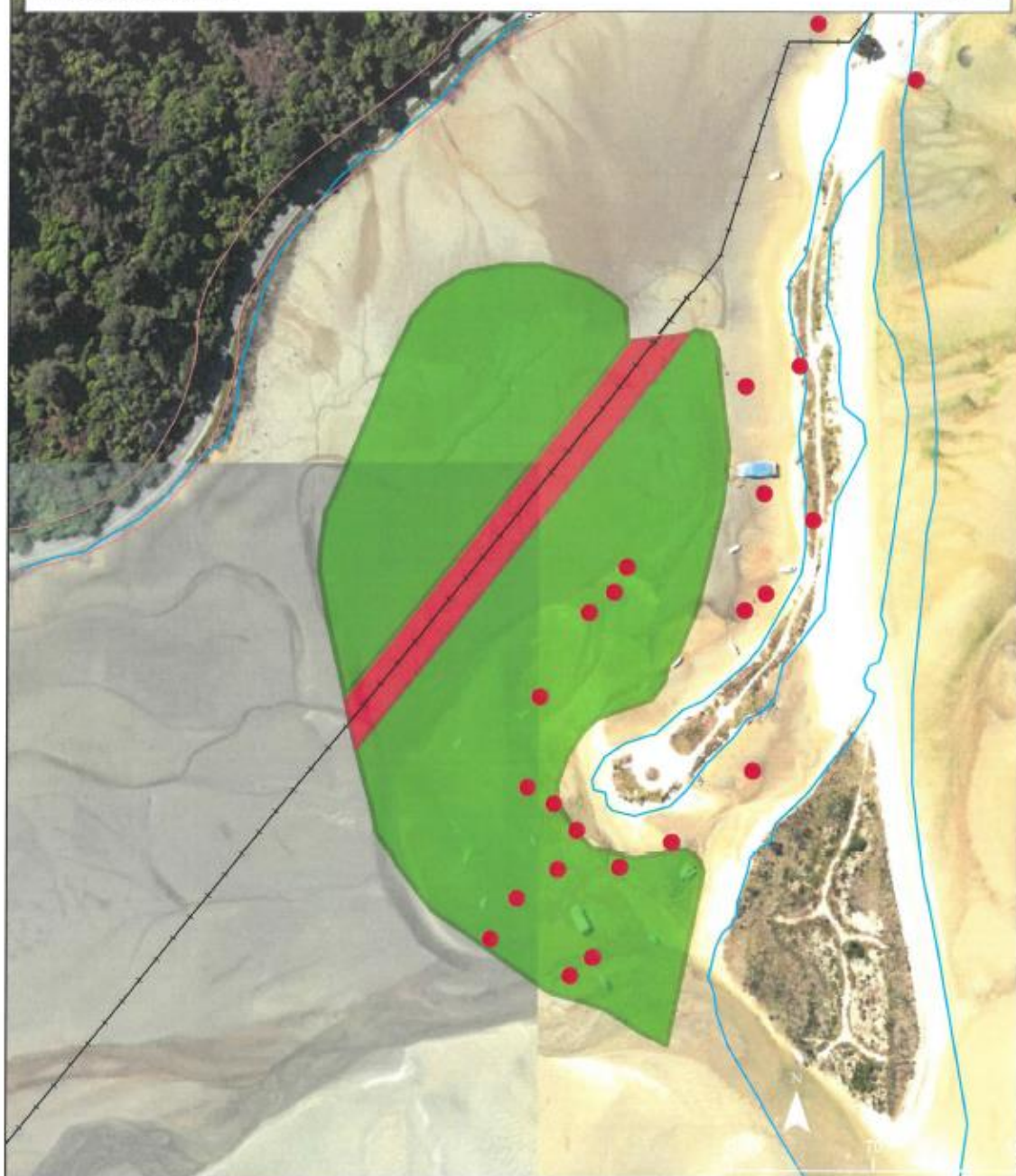


# Review of TRMP Mooring Areas











Otuwhero Inlet - Marahau

October 2018

Map 7



N  
1:2,500

- |   |  |   |
|---|--|---|
|  Add Mooring Area    |  TRMP Coastal Structures    |  11kV Underground Cable  |
|  Delete Mooring Area |  TRMP and Other Consents    |  Wastewater Pipes        |
|   |  Confirm Coastal Structures |  Water Pipes             |
|   |  |  Mean High Water Springs |
|   |  |  Current Mooring Area    |

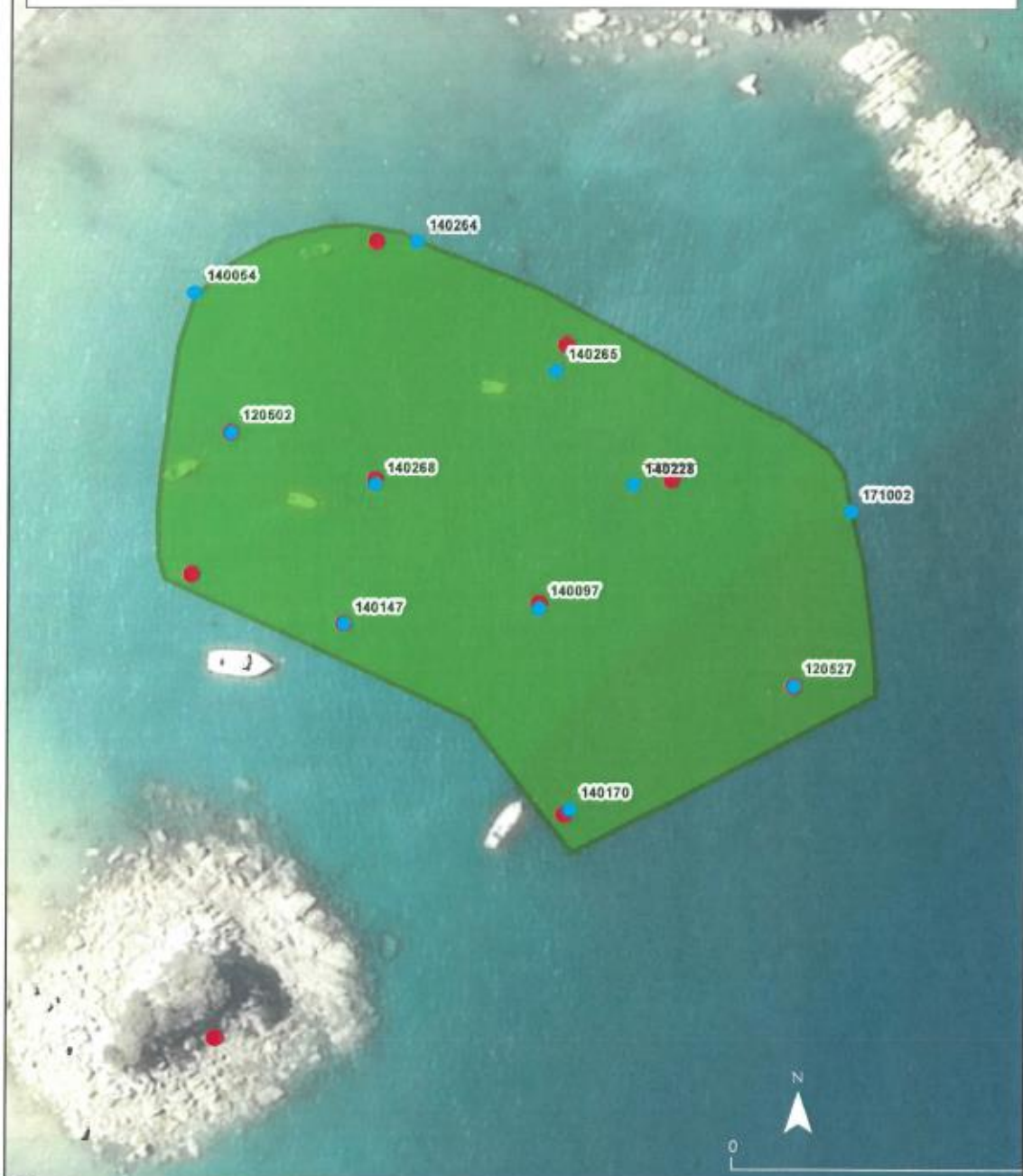


# Review of TRMP Mooring Areas











Glasgows and Torrent Bays

October 2018

Map 8



N  
1:1,000

- |   |                     |   |                            |   |                         |
|---|---------------------|---|----------------------------|---|-------------------------|
|  | Add Mooring Area    |  | TRMP Coastal Structures    |  | 11kV Underground Cable  |
|  | Delete Mooring Area |  | TRMP and Other Consents    |  | Wastewater Pipes        |
|   |                     |  | Confirm Coastal Structures |  | Water Pipes             |
|   |                     |   |                            |  | Mean High Water Springs |
|   |                     |   |                            |  | Current Mooring Area    |



# Review of TRMP Mooring Areas

October 2018

Boundary Bay

Map 9



N  
1:1,200

- |  |                     |  |                            |  |                         |
|--|---------------------|--|----------------------------|--|-------------------------|
|  | Add Mooring Area    |  | TRMP Coastal Structures    |  | 11kV Underground Cable  |
|  | Delete Mooring Area |  | TRMP and Other Consents    |  | Wastewater Pipes        |
|  |                     |  | Confirm Coastal Structures |  | Water Pipes             |
|  |                     |  |                            |  | Mean High Water Springs |
|  |                     |  |                            |  | Current Mooring Area    |





# Review of TRMP Mooring Areas











October 2018

Milnthorpe

Map 10



N  
1:1,200

- |   |                     |   |                            |   |                         |
|---|---------------------|---|----------------------------|---|-------------------------|
|  | Add Mooring Area    |  | TRMP Coastal Structures    |  | 11kV Underground Cable  |
|  | Delete Mooring Area |  | TRMP and Other Consents    |  | Wastewater Pipes        |
|   |                     |  | Confirm Coastal Structures |  | Water Pipes             |
|   |                     |   |                            |  | Mean High Water Springs |
|   |                     |   |                            |  | Current Mooring Area    |

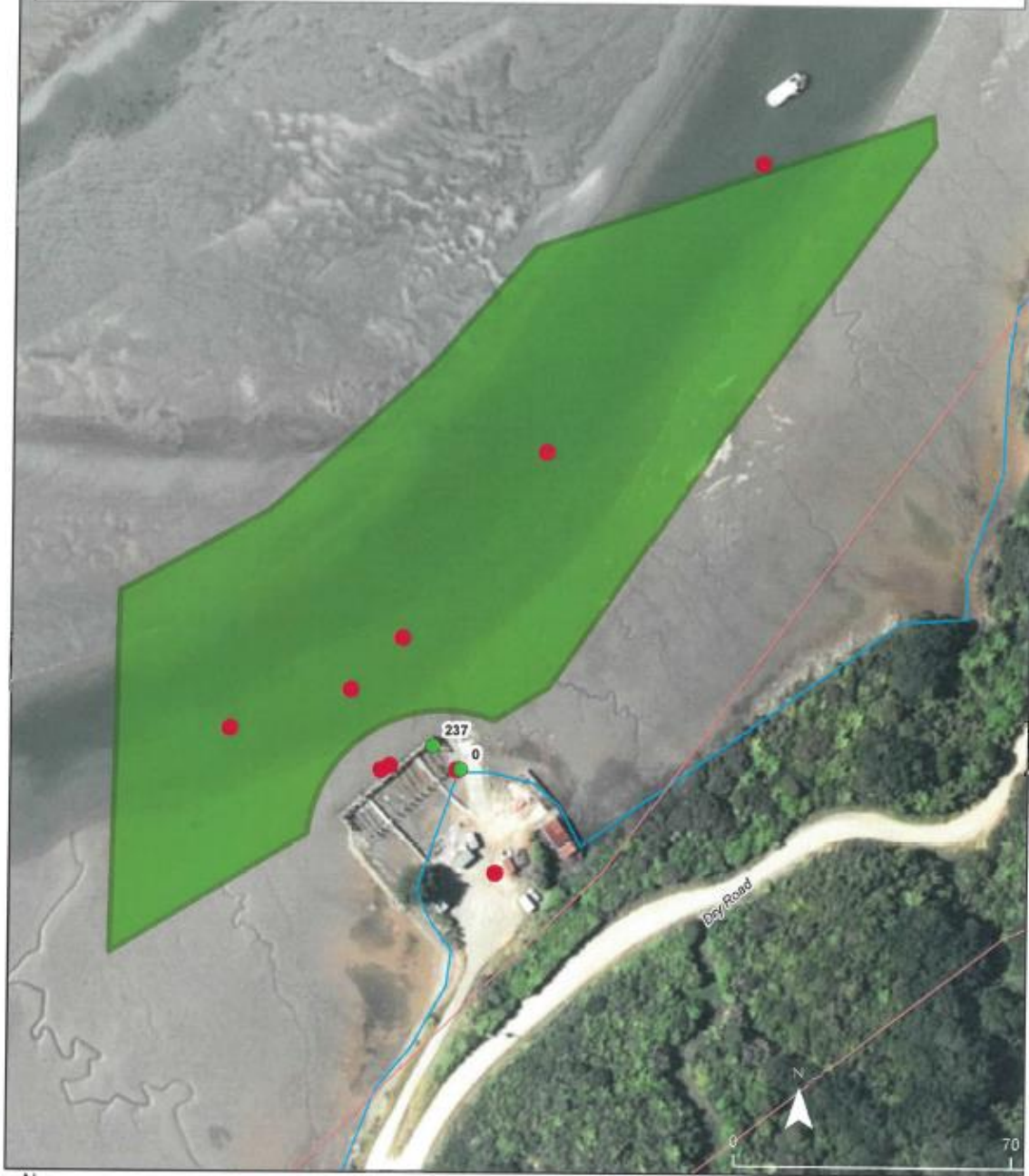


# Review of TRMP Mooring Areas

October 2018

Mangarakau wharf

Map 11



N  
1:1,300

- Add Mooring Area
- Delete Mooring Area
- TRMP Coastal Structures
- TRMP and Other Consents
- Confirm Coastal Structures
- 11kV Underground Cable
- Wastewater Pipes
- Water Pipes
- Mean High Water Springs
- Current Mooring Area





*Davidson Environmental Limited*

Biological report in relation  
to proposed mooring areas  
located between Waimea  
Inlet and Whanganui Inlet:  
biological features, habitats  
and issues

Research, survey and monitoring report number 806

*A report prepared for:  
Tasman District Council  
Queen Street, Richmond  
Nelson*

April 2015



Bibliographic reference:

Davidson, R.J. 2015. Biological report in relation to proposed mooring areas located between Waimea Inlet and Whanganui Inlet: biological features, habitats and issues. Prepared by Davidson Environmental Ltd. for Tasman District Council. Survey and monitoring report no. 806. 44p.

© Copyright

The contents of this report are copyright and may not be reproduced in any form without the permission of the client.

Prepared by:

Davidson Environmental Limited  
P.O. Box 958, Nelson 7040  
Phone           03 5452600  
Mobile          027 4453 352  
e-mail           davidson@xtra.co.nz

April 2015



*Specialists in research, survey and monitoring*

## Contents

1.0	Introduction and aims.....	4
2.0	Field work.....	4
3.0	Impact of moorings on the marine environment .....	5
3.1	Subtidal environments .....	5
3.2	Intertidal environments .....	8
3.3	Impacts observed at Tasman and Golden Bay sites.....	9
3.3.1	Pole moorings .....	9
3.3.2	Swing moorings.....	10
4.0	Known biological features and issues at mooring sites.....	12
4.1	Mangarakau Wharf mooring area (Whanganui Inlet) .....	13
4.2	Golden Bay .....	14
4.2.1	Milnthorpe mooring area (Parapara Estuary) .....	15
4.3	Abel Tasman coast .....	18
4.3.1	Ligar mooring area (Ligar Inlet/Tata Estuary) .....	18
4.3.2	Boundary and Glasgow Bays (Abel Tasman National Park).....	22
4.3.3	Otuwhero Inlet (Abel Tasman coast, Marahau) .....	24
4.3.4	Kaiteriteri (Abel Tasman Coast) .....	27
4.3.5	Stephens Bay (Abel Tasman Coast).....	29
4.3.6	Tapu Bay (Abel Tasman coast).....	30
4.4	Tasman Bay coast.....	34
4.4.1	Moutere delta (Tasman Bay) .....	34
4.4.2	Moutere Inlet marina (Tasman Bay).....	36
4.4.3	Mapua Channel and Grossi Point (Waimea Inlet) .....	39
	References .....	42

## **1.0 Introduction and aims**

The Tasman District Council (TDC) is reviewing the Tasman Resource Management Plan (TRMP) in relation to boat moorings. This involves a period of data collection including public consultation starting in January 2015. The aim of the present study was to provide biological information for this process.

In particular the present report aims to:

1. Provide information about known biological features for each proposed mooring area and the adjacent marine environment.
2. Collect and collate habitat and biological information for selected intertidal sites.
3. Outline issues and potential threats to known biological features.
4. Provide information in relation to known impacts of mooring and the types of mooring structures.

## **2.0 Field work**

A number of intertidal sites were visited during the present study on 12 and 13 March 2015. Habitats and substrata were visually assessed and mapped onto aerial photos. A real time GPS map was used to determine positions during field work. Notes on dominant species and wildlife were also collected. Sites visited were: Milnthorpe, Ligar Estuary, Otuwhero Inlet, Tapu Bay, Moutere delta and Moutere Inlet.

Photos and notes were also collected for vessels moored at sites to visually investigate impact levels.

Habitat types and substrata were mapped onto google earth aerials that represented the most recent images with the tide out.

### **3.0 Impact of moorings on the marine environment**

#### **3.1 Subtidal environments**

The impact of swing moorings on the marine environment has often been regarded as relatively minor compared to many anthropogenic (human related) effects. In an international study canvassing 105 marine experts, intertidal/subtidal reef (1=), subtidal sand (5=), subtidal mud (1=), intertidal mud (5=) habitats in harbours and estuaries were ranked the most vulnerable and threatened marine habitats in New Zealand (MacDiarmid *et al.* 2012). Moorings were not specifically listed in the study, however, human related impacts from pontoons (52=) anchoring (30=) and engineered structures (36=) were ranked as threats to the marine environment, but ranked relatively low compared to threats such as ocean acidification (1), climate change (2), bottom trawling (3=) and sedimentation (3=).

Despite the relatively low rank for marine structures like moorings, a number of authors have raised concerns about the impact of traditional moorings in relation to sensitive species or habitats (Walker *et al.*, 1989; Hastings *et al.*, 1995; Montefalcone *et al.*, 2008, Demers *et al.* 2013). Demers *et al.* 2013 stated that “permanent boat moorings are one of the main causes of mechanical disturbance to seagrass, almost always producing scoured areas within seagrass meadows” (Figure 1A). Further the authors stated “these moorings are often highly concentrated across many of the world’s embayments, especially on densely inhabited coastlines, and so represent a large-scale disturbance. These impacts will likely increase with the need for more vessel moorings worldwide (Duarte *et al.*, 2008). Demers *et al.* 2013 stated that the threat of damage of important habitats “is heightened as both seagrasses and vessel anchorages favour locations with reduced water movement and wave-action hence the siting of mooring locations is often in places where sensitive habitats such as seagrass occurs.

In New Zealand, Sneddon (2010) reported that swing mooring scars were obvious under moorings located in Waikawa, Picton and the impact extended up to 10 m distance from the block (Figure 2). Sneddon (2010) stated, however, that “moorings in Waikawa Bay, did not represent a more than a minor ecological impact to soft sediment due to the following factors:

- The small benthic areas affected relative to the amount of similar soft sediment habitat in the wider area.

*Specialists in research, survey and monitoring*

- Relatively depauperate epibiotic communities over much of the area proposed for the swing mooring zones, especially those in water depths greater than 7 m.
- Absence of significant biogenic structures.
- Resilient sediment infauna assemblages characterised by relatively high mobility, short generation times and high rates of recruitment and migration.

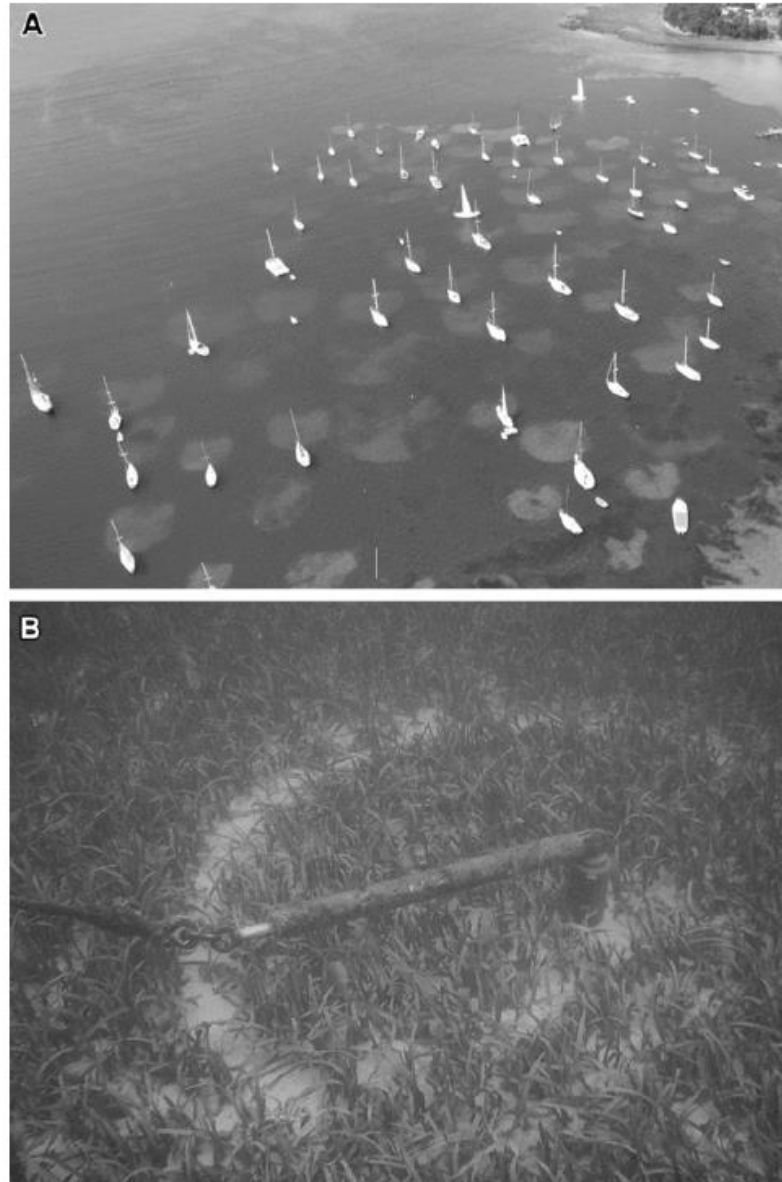
In New Zealand there are very few subtidal seagrass beds and many sheltered subtidal embayment's are characterised by mud substrata, however, some sheltered harbours, estuaries and coastal embayment's do support biological features of importance (e.g. tubeworm beds, horse mussel beds, shellfish beds, high current habitats and red algae beds; see: Davidson *et al.* 2011, Morrison *et al.* 2014a, 2014b). The loss or damage of these biological features would likely represent an adverse impact and traditional swing moorings represent one potential anthropogenic threat to these habitats, species or communities.

Internationally, areas where sensitive or important subtidal habitats or communities exist, alternative mooring systems have been trailed (Figure 1b). Demers *et al.* (2013) compared the impact zone of swing moorings with screw moorings. The authors reported an impact zone of approximately 8 m distance from conventional swing moorings giving a total impact zone of 16 m diameter, however, highest impacts were recorded in the first 5 m distance from the anchor block giving a high impact zone of 10 m diameter. The authors reported that the impact associated with the screw mooring system was close to seagrass cover and abundance recorded at the control sites with no moorings (Figure 1).

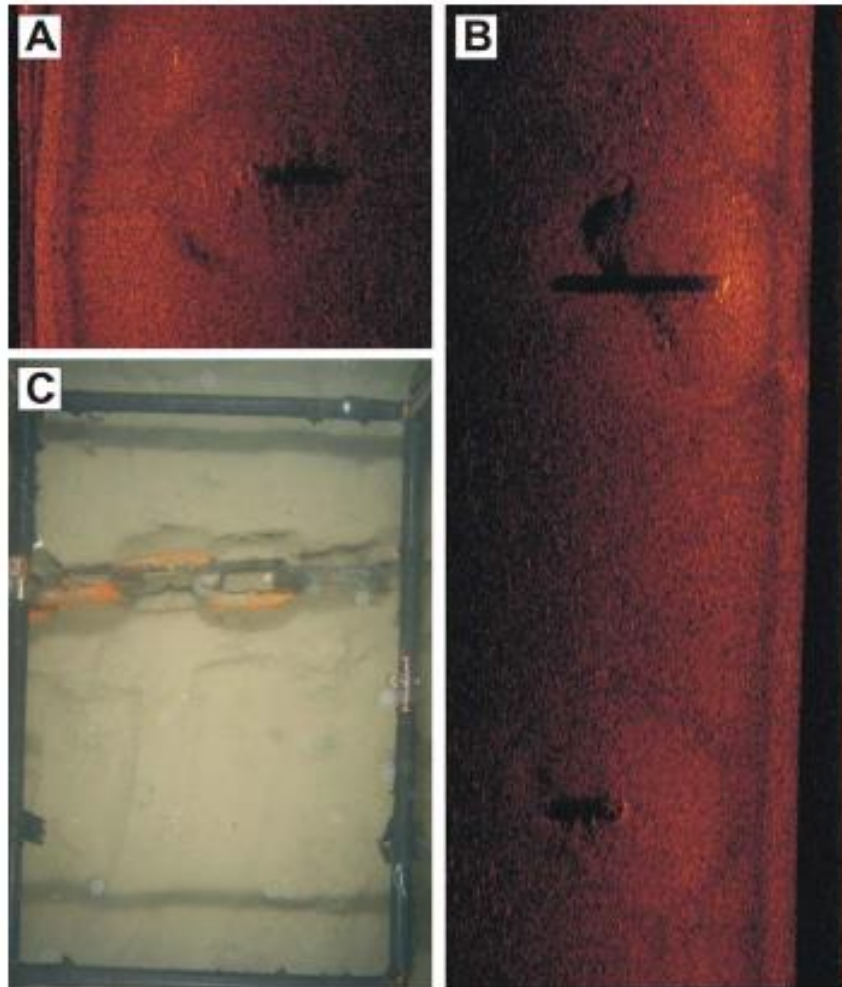
This study emphasises the following:

1. swing moorings impact the sea bed up to 5-10 m of the mooring block depending on the structure and depths.
2. In areas that support sensitive or vulnerable habitats or species, moorings can be either excluded, removed or if permitted, adopt a structure or system that results in little or low impact.





**Figure 1. (A) Aerial photograph of mooring in Callala Bay, Australia showing impact zones around traditional swing moorings, (B) underwater photo of a screw mooring impact at Bindijine Beach, Australia (from Demers *et al.* 2013).**



Mooring chain sweep effects in Waikawa Bay: **A,B.** Circular mooring scars, shown by side-scan sonar imaging, within the existing mooring field adjacent to the southern shoreline. Scars are 14-20 m in diameter in water depths of 8-14 m. Sonar shadows are cast by the central mooring block depending on its height off the seabed. **C.** Drop-camera image of mooring chain showing sweep imprint in soft mud/sand substrate.

**Figure 2. Side scan and photo in Waikawa Bay showing impact zone around mooring blocks (from Sneddon 2010).**

### 3.2 Intertidal environments

Few studies have investigated the impact of swing moorings on intertidal sediments and the associated biological communities. At a European estuarine site, Herbert *et al.* (2009) reported that the species assemblage structure adjacent to structures were found to be significantly different to unaffected areas. Further they stated “the effect of swinging mooring chains scraping over the mud surface may modify sediments favouring the greater

*Specialists in research, survey and monitoring*

prominence of larger particles such as gravel and shell fragments. The authors showed, however, that intertidal sediments showed varying levels of recovery over a 15 month period after moorings were removed.

### **3.3 Impacts observed at Tasman and Golden Bay sites**

During field work for the present report impacts associated with vessels moored at a variety of intertidal sites were photographed and described.

#### **3.3.1 Pole moorings**

Pole moorings differ from swing moorings as vessels are held in position by the pole structures (Plate 1). Vessels rise and fall with the tide, however, the points of contact with the substratum is restricted to relatively small areas due to pole support and tethering (Plate 1). Physical disturbance appears limited to the small area where the keel or hull contacts the substratum. At some sites, shell debris and organisms were observed accumulating under the vessels (Plate 2). These have presumably become dislodged or been removed from the hull over time.



**Plate 1. Pole mooring located in Ligar Estuary entrance.**



**Plate 2. Shell debris deposited beneath pole moored vessels in Ligar Estuary entrance.**

### **3.3.2 Swing moorings**

Traditional swing moorings hold vessels at the bow via one or two anchors or blocks (Plate 3). Vessels settle on the benthos at a variety of locations usually determined by combinations of tide and wind. The vessel in Plate 3 often settle facing into the outgoing tide leaving a number of localised indentations or depressions where the keels have previously settled. Some swing moored vessels have been attached from the bow and the stern (Plate 4). Again tide and wind influenced the location where the vessel settles, however its swing may be further limited by the stern anchor. In all cases, no scraping of the surface sediments was observed. Vessels appear to settle and are not dragged across the sediment surface.

*Specialists in research, survey and monitoring*



**Plate 3. Traditional swing mooring in Moutere Inlet. Note keel settlement depressions.**



**Plate 4. Swing mooring with bow and stern moorings.**

#### **4.0 Known biological features and issues at mooring sites**

The mooring areas in Tasman and Golden Bays (Waimea Inlet to Whanganui Inlet) are located in one or more habitat types including:

- Estuarine intertidal.
- Estuarine tidal channels.
- Estuarine subtidal channels.
- Coastal intertidal flats.
- Coastal subtidal.

Sites with known biological, ecological or scientific value have been identified from within or close to some of these mooring areas (Davidson and Moffat 1990; Davidson 1990; Davidson *et al.* 1993; Elliot 1989; Schuckard and Mellville 2013; Robertson and Stevens 2008, 2009; 2012, Davidson *et al.* 2013).

A number of coastal areas have been identified with significant conservation values in the Tasman District Council Plan. The top of the South Island is generally regarded as unique in New Zealand for a variety of reasons:

- Three Marine Reserves (Te Tai Tapu, Tonga Island, Horoirangi).
- A coastal National Park (Abel Tasman).
- Internationally recognised bird areas (e.g. Farwell Spit).
- Unique and varied seascapes and landforms.
- Numerous estuaries and sheltered bays.
- A high number of status marine species.

In the following sections each proposed mooring area is described. In particular these section outline:

1. A summary of biological values.
2. The relative importance of biological values.
3. A description of each mooring area
4. Summary of known or predicted habitats, species and/or biological values.
5. Issues and threats.
6. Recommendations based on biological criteria.

#### 4.1 Mangarakau Wharf mooring area (Whanganui Inlet)

Whanganui Inlet is the first estuary in New Zealand to be protected by a combination of Marine Reserve and Wildlife Management Reserve (1994). The estuary is 2,774 ha, surrounded by a variety of forest types, a small settlement at Rakopi, isolated houses and pasture predominantly located on the north head (Davidson 1990). Davidson (1990) stated that approximately 30 species of marine fish use the inlet at some stage of their life cycle and is an important breeding and nursery area for snapper, flatfish, kahawai and whitebait. Many fish enter the estuary to take advantage of the rich food supply found in eelgrass beds and intertidal sand flats. The estuary provides habitat for status species such as banded rail, banded dotterel and Australasian bittern. Overall, Whanganui Inlet is the best example in Nelson/Marlborough of an estuary in a relatively intact and natural state (Davidson *et al.* 1993). Davidson (1990) compared biological values with three other estuaries in the Sound Island using a standard set of criteria and concluded Whanganui Inlet had the highest score.

**Mooring location:** Adjacent to Mangarakau wharf, Whanganui Inlet.

**Proposal:** create new mooring area.

**Existing moorings:** two non-consented or expired moorings located in channel and are within the proposed mooring area. One consented wharf is located adjacent to the proposed mooring area.

**Sea protection:** Surrounded by Te Tai Tapu Marine Reserve.

**Adjacent terrestrial protection/ownership:** Road reserve, North-west Nelson Forest Park.

**Terrestrial vegetation:** Regenerating scrub, pockets of scrub and forest (Davidson 1990).

**Marine habitats inside mooring area:** Subtidal estuarine channel, intertidal flats (very fine sand, eelgrass (see habitat map In: Davidson 1990) (Figure 1).

**Wildlife:** A variety of birds utilise Whanganui Inlet as a feeding area (Davidson 1990). The proposed mooring area is not recognised as an important area for birds, however it is part of the greater area of the estuary utilized by birds.

**Human modification:** Most of the terrestrial catchment is protected and is in varying stages of regeneration. Historically the area was cleared of vegetation and a variety of raw resources such as flax, coal and wood removed. Estuarine contamination levels have not been established, but they are likely to be low compared to many estuaries in the region that are close to larger towns and cities. The derelict wharf and associated reclamation has a number of small buildings and a launching ramp. The estuary is relatively natural with few existing human impacts.

**Proposed mooring area:** The proposed mooring area covers an area excluded from the marine reserve. The proposed mooring area extends over both subtidal and intertidal habitats. The most sensitive habitat is likely to be eelgrass located on the offshore sand

*Specialists in research, survey and monitoring*

flats. Although widespread in the wider estuary, this habitat is an important part of the estuarine food chain and is known to be adversely impacted by mooring chains. The habitats and species in the subtidal channel have not been described, however it is probable that they are comparable to other parts of the main channel that extend from Pah Point to the western end of Whanganui Inlet.

**Recommendations on biological grounds:**

- Avoid intertidal habitats by limiting the proposed mooring area to the subtidal channel.



**Figure 1. Mangarakau Wharf and adjacent channel (aerial December 2004).**

## **4.2 Golden Bay**

Golden Bay is a relatively shallow semi enclosed body of water, sheltered to the north by Farewell Spit and to the southeast by Abel Tasman National Park. The Bay supports numerous estuaries that are regarded as nationally important. These are Puponga Inlet; Pakawau Inlet; Waikato Spits Inlet and saltmarsh; Ruatanhiwha Inlet; Parapara Inlet and sandspits; Onekaka Estuary and sandspit; Onahau Estuary; Waitapu Estuary; Motupipi



*Specialists in research, survey and monitoring*

Estuary; Ligar Estuary; Wainui Inlet and the section of coast between Pohara and Abel Tasman Point. All of which provide nesting, roosting, and feeding habitat for estuarine species and wading birds including the royal spoonbill, banded rail, banded dotterel, South Island fernbird, spotless crane, variable oystercatcher, Australasian bittern, and Caspian tern.

#### 4.2.1 Milnthorpe mooring area (Parapara Estuary)

Robertson and Stevens (2012) described the Parapara Estuary as “a moderate-sized (195 ha), shallow, well-flushed, seawater dominated, tidal lagoon type estuary with one tidal opening, one main basin and extensive saltmarsh and seagrass beds. A large embayment (22 ha) is cut off from the main body of the estuary by a causeway (State Highway 60). The catchment is mostly undeveloped and dominated by native forest (96%) and exotic forestry (2%). Developed pasture is only 1% of the catchment. Sand spits to the north and south enclose the inlet from the open sea. On the northwest shore a limestone band is exposed and freshwater springs bubble up through the mudflats nearby.”

Roberston and Stevens (2012) stated “ecologically, habitat diversity is high with much of its intertidal vegetation intact, extensive shellfish beds, large areas of saltmarsh (21% of estuary), some seagrass (0.6% of estuary), rocky platforms and sand dune. However, the estuary is excessively muddy (25% soft mud), the southern end has been modified, and a causeway and road cuts through the western area. The lagoon area upstream of the causeway is poorly flushed, through inadequate culvert drains, and consequently has excessive sedimentation and degraded habitat. The estuary is recognised as a valuable nursery area for marine and freshwater fish, an extensive shellfish resource, and is very important for birdlife”. Davidson *et al.* (1993) stated “the tip of the southern sand spit is an important high tide roost for banded dotterel, Caspian tern and variable oystercatcher.”

**Mooring location:** Tidal embayment west of wharf, Parapara Estuary, Milnthorpe.

**Proposal:** create new mooring area.

**Existing moorings:** Three consented swing moorings (presently located outside the proposed mooring area) and three non-consented swing moorings (located inside the proposed mooring area). One consented jetty and a non-consented fixed mooring is located outside the proposed mooring area.

**Proposed mooring area:** The proposed mooring area extends over approximately half of a small embayment located west of the old wharf. The proposed mooring area extends over mostly intertidal habitats. Robertson and Stevens (2012) recorded the area as firm mud and sand which is widespread in the Parapara Estuary.



**Figure 3. Parapara Estuary and proposed mooring in red (aerial 2013).**

**Sea protection:** No marine protection.

**Adjacent terrestrial protection/ownership:** Road reserve, private land. Walkway exists along terrestrial edge.

**Terrestrial vegetation:** Regenerating native vegetation with some larger trees and some exotic trees.

**Marine habitats inside mooring area:** Most of the 0.57 ha mooring area is dominated by alluvial cobble and pebble substrata with a surface component of silt and clay (Figure 4). Areas close to the minor channels that drain the area are characterised by fine substratum composed of combinations of sand, fine sand and silt and clay. Cockles and cockle shells are common in these fine substratum areas. Sea rushes and a sedge species are present along the high tide shore north of the mooring area. An area of eelgrass was observed east of the mooring area adjacent and within the secondary channel (Figure 4).

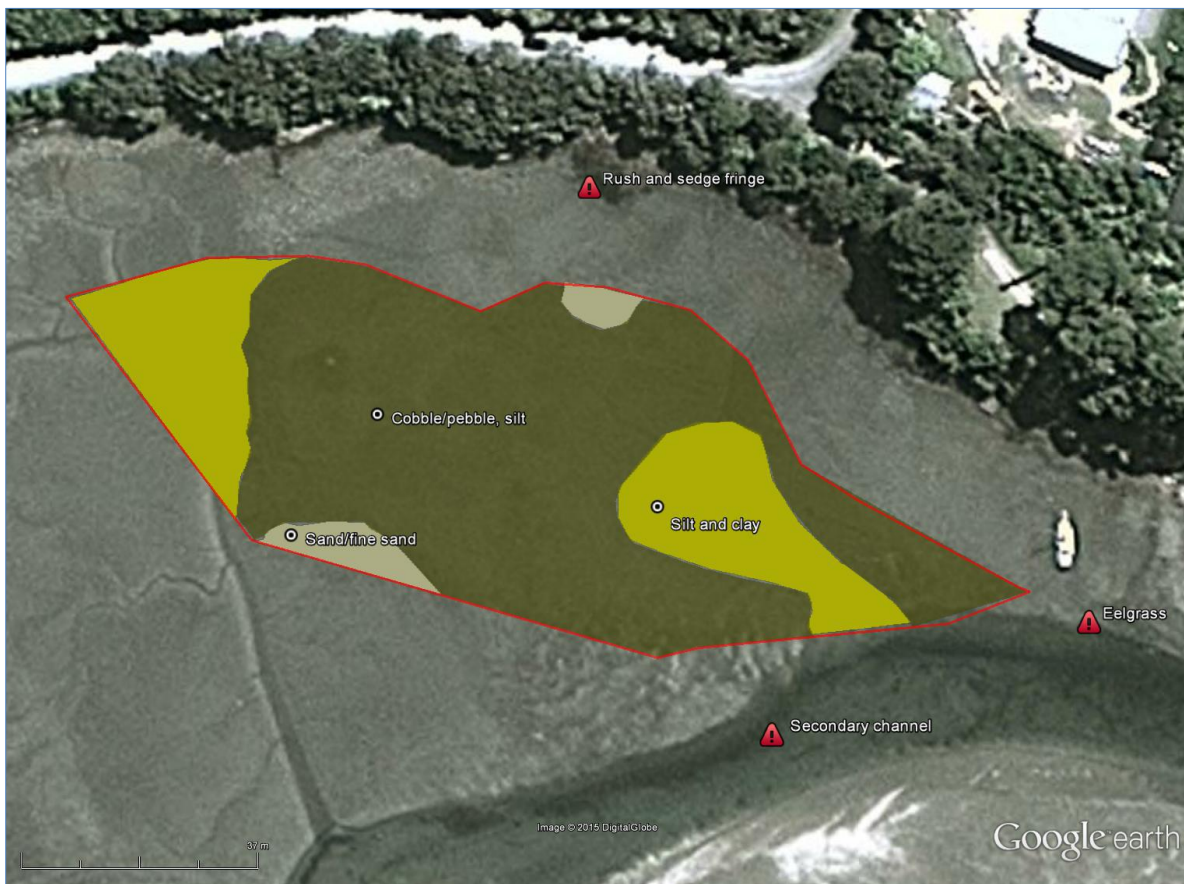
**Wildlife:** A variety of birds utilise Parapara Inlet (Knox *et al.* 1977; Davidson *et al.* 1993). Robertson and Stevens (2012) rated the estuary as very important to birdlife and it is likely this area is utilized by birds, particularly waders. No birds were observed feeding within the mooring area during the collection of habitat data, however areas adjacent and within the secondary channel provide good habitat for feeding waders.

*Specialists in research, survey and monitoring*

**Human modification:** Most of the terrestrial catchment is in varying stages of regeneration. Historically the area has been cleared of vegetation. Estuarine contamination levels have not been established, but it is likely they are low compared to estuaries close to larger towns and cities in New Zealand. Much of the adjacent coastal areas have been developed for low density housing. The marine environment is considered to be in a relatively natural state compared to estuaries close to larger towns and cities in New Zealand.

**Recommendations on biological grounds:**

- No modification to the proposed mooring areas is suggested on biological grounds. The habitats located within the mooring area are either robust (cobble/pebble and silt) or are widespread in the wide estuary (sand, fine sand and silt substrata).
- Habitats of importance in the vicinity (but not within) the mooring area include: eelgrass bed, rush and sedge habitat, secondary estuarine channel.



**Figure 4. Habitat located in mooring area. Note eelgrass, rush and channel features.**

### 4.3 Abel Tasman coast

The Abel Tasman coast stretches from Pohara in the north to the Riwaka River in the south. The coast is renowned for its golden beaches, rocky outcrops (comprised of granite with some limestone and marble), sandy estuaries and the world famous Abel Tasman Coast Track. Tonga Island Marine Reserve has been established alongside the National Park and covers an area of 1,835 ha, extending 1.8 km offshore.

#### 4.3.1 Ligar mooring area (Ligar Inlet/Tata Estuary)

Robertson and Stevens (2012) described the Tata Beach Estuary as “a small (17 ha), shallow, well-flushed, seawater-dominated, tidal lagoon type estuary with a small amount of saltmarsh which discharges into Ligar Bay. Sediments are granite alluvium derived from the steep erodible hill country to the east. The granite catchment is highly erodible and land disturbance could lead to excessive sediment inputs to the estuary.” The authors ranked its use as high stating “it is valued for its aesthetic appeal, its biodiversity, shellfish collection, bathing, whitebaiting, fishing, boating, walking, and scientific appeal. Evidence of early Maori occupation is found throughout the area.” Much of the catchment is pine plantation with areas of native regeneration and pasture on the lower slopes.

With respect to ecological values Roberston and Stevens (2012) stated “habitat diversity is moderate and includes un-vegetated tidal flats, saltmarsh, seagrass, and herbfields. However, significant areas of saltmarsh and natural vegetated margin have been lost. A causeway for vehicle traffic cuts through saltmarsh habitat in the upper estuary and exotic plant growth is common around the margins, as is residential development. In addition, the estuary is excessively muddy (35% is soft mud). The estuary is recognised as a valuable nursery area for marine and freshwater fish, a shellfish resource, and important for birdlife”. Davidson *et al.* (1993) stated “banded rail (G. Elliot, pers. comm.) and South Island fernbird are present along the western edge of the estuary and a small number of waders feed along the main channel.”

**Mooring location:** Tidal embayment located inshore of a cobble fore-shore and a sand spit at the entrance to the Estuary.

**Proposal:** create new mooring area.

**Existing moorings:** 13 unconsented swing moorings are located within the proposed area. Another 9 are located west or further into the estuary. A number of fixed moorings or jetties are located outside the proposed mooring area.



**Figure 4. Tata Estuary entrance into Ligar Bay (April 2013).**

**Sea protection:** No marine protection.

**Adjacent terrestrial protection/ownership:** Road reserve, private land.

**Terrestrial vegetation:** Residential, regenerating scrub.

**Marine habitats inside mooring area:** The main tidal channel linking the estuary with Ligar Bay flows through this area and has a major impact on the habitats that dominate this area (Figure 4). Most of the proposed 0.801 ha mooring area is dominated by coarse and medium sands with a strong component of dead whole and broken shell (Figure 5). Mud substratum is restricted to the northernmost portion of the mooring area where tidal flows are likely to be lower. Coarsest sands and shell substratum is located in the northern area of the proposed mooring area where tidal currents on the outgoing tides are strongest. Cockles, pipis and cockle shell appears common over the area. A relatively large area of eelgrass was observed east of the mooring area adjacent to the sand spit (Figure 5). A small mussel bed dominated by the small black mussel (*Xenostrobus pulex*) was observed within the proposed mooring adjacent to the main channel.

**Wildlife:** A variety of birds use Ligar Beach and Estuary (Robertson and Stevens 2012). Robertson and Stevens (2012) rated the estuary as important to birdlife and it is likely this

*Specialists in research, survey and monitoring*

area is utilized by birds, particularly waders and herons. During the habitat mapping, 30 oystercatchers were observed feeding on the coast sand area located on the northern side of the seaward entrance (Figure 5).



**Figure 5. Habitat map for Ligar Estuary mooring site.**

**Human modification:** Robertson and Stevens (2012) stated 13% of the catchment was clad in native forest, 60% in exotic forest, 26% in pasture. Much of the terrestrial vegetation around the immediate edges of the estuary is in varying stages of regeneration, however residential development and the road often reach the estuarine margins. Historically the area has been cleared of its original vegetation. Areas of saltmarsh have been reclaimed

*Specialists in research, survey and monitoring*

along the north-eastern margins. Robertson and Stevens (2012) reported that the estuary was subjected to excess levels of mud derived from the catchment. Estuarine contamination levels have not been established, but it is likely they are low compared to estuaries close to larger cities in New Zealand.

**Proposed mooring area:** The proposed mooring area extends over a central strip in the entrance to the Estuary. The proposed mooring area is over an area located between the outer cobble shore and the inner sand spit. Sensitive and biologically important habitats are located adjacent and within parts of the proposed mooring area. Apart from the small area of mud and sand, the habitats and substrata recorded in the entrance have not been recorded from the estuary proper (see habitat map In: Robertson and Stevens 2012).

**Recommendations on biological grounds:**

- It is recommended that the northern part of the proposed mooring area be excluded from consideration as this main channel supports a variety of habitats less common in Nelson/Marlborough estuaries (Figure 6). Of particular significance are the small mussel beds and current swept coarse sand substratum that likely supports high numbers of juvenile pipis.
- An area at the south western end of the proposed mooring site could replace the removed area as this area supports habitats widespread in Nelson/Marlborough Estuaries (Figure 6).



**Figure 6. Exclusion zone (pink) and potential additional area for mooring (green).**

### 4.3.2 Boundary and Glasgow Bays (Abel Tasman National Park)

Davidson (1992) described the Abel Tasman National Park coast (92 km) as combinations of sandy beaches, sandy estuaries and granite rocky coasts. The coast is a high use area and is internationally recognised for its scenic values. Davidson (1992) reported a low biomass of marine algae, a high diversity of reef fish, however, the abundance of edible fish species was low. The author recognised 12 subtidal habitat types and their approximate locations were mapped. Important areas for sea birds were also mapped along the Abel Tasman coast (Davidson 1992).

The proposed mooring areas located in Boundary and Glasgow Bays have not been surveyed, however, substrate maps produced by Davidson (1992) cover these areas and provide a general description of substratum. A site located approximately 160 m east of the Boundary Bay mooring area has been used as a biological monitoring site since 1994 (Davidson and Richards 2013).

**Mooring locations:** Subtidal areas located in Boundary Bay and Glasgow Bay.

**Proposal:** create one new mooring area in each bay.

**Existing moorings:** Boundary Bay has 8 consented swing moorings, all located within the proposed mooring area.

Glasgow Bay has 10 consented swing moorings, all located within the proposed mooring area.

Five unconsented fixed moorings or jetties and one consent for the same exist in Torrent Bay Estuary.

**Sea protection:** National Park above mean high water and private titles. The intertidal area between mean high water and mean low water is protected by the Abel Tasman Foreshore Scenic Reserve and has its own Management Plan and Administration Committee.

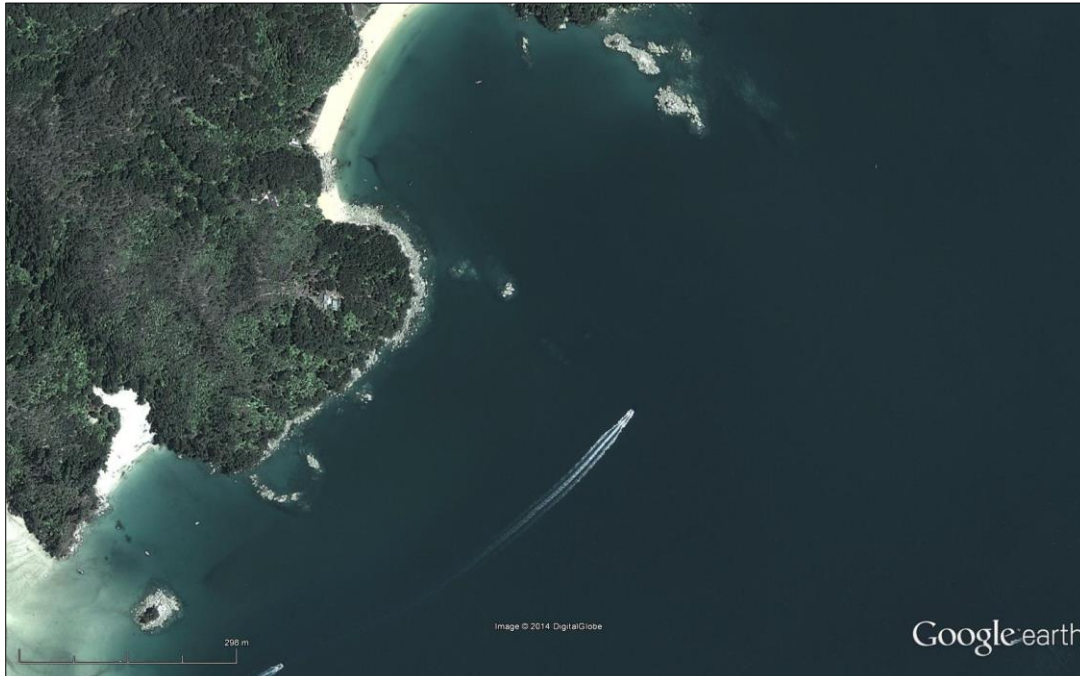
**Adjacent terrestrial protection/ownership:** Private land. National Park is located inland of private coastal land on the higher slopes.

**Terrestrial vegetation:** Regenerating scrub/forest

**Marine habitats inside mooring area:** Subtidal (shelly/sandy mud see Davidson 1992).

**Wildlife:** Not identified as an important bird area (Davidson 1992). A variety of birds utilise the rocky coast (e.g. reef heron, oyster catcher) and offshore waters (terns, shearwater), however these areas are moderate to low importance compared to other areas along the remainder of the Abel Tasman coast.





**Figure 7. Boundary and Glasgow Bays, Abel Tasman (January 2011).**

**Human modification:** Most of the terrestrial vegetation around the edges of this coast is in varying stages of regeneration. Historically the area has been cleared or burnt of its original vegetation. Contamination levels along the Abel Tasman coast are relatively low compared to coastal areas near larger towns and cities (Davidson and Freeman 2013). Occasional recreational dredging for scallops occurs in the Torrent Bay area. The estuaries and inshore subtidal environment of the Abel Tasman coast are, however, in a relatively natural state.

**Proposed mooring area:** The proposed mooring areas extend over relatively low gradient shelly, sandy mud substratum (Davidson 1990). This habitat type is widespread along inshore areas of the Abel Tasman coast. No sensitive or important habitat have been identified from this area, however, the area has not been the subject of a high resolution survey. Davidson and Richards (2013) have sampled an area close to Boundary Bay (1994 – 2013) and have described the soft bottom environment as relatively uniform shell, sand and mud substrata. No horse mussel, red algae or scallop beds have been observed at their sample site.

**Recommendations on biological grounds:**

- No modifications to the proposed mooring areas are suggested.

*Specialists in research, survey and monitoring*

### 4.3.3 Otuwhero Inlet (Abel Tasman coast, Marahau)

Robertson and Stevens (2012) described Otuwhero Inlet as “a moderate-sized (95 ha), shallow, well-flushed, seawater-dominated, tidal lagoon type estuary with one tidal opening, one main basin, a small tidal arm and a large freshwater influenced saltmarsh separated by a causeway. It has a double sand pit (700 m long) largely vegetated in exotic weeds. Much of the estuary catchment is forest (primarily exotic 46%), with intensive pastoral use at 10%. The granite catchment is highly erodible and land disturbance has led to excessive sediment inputs to the estuary.”

With respect to ecological values Roberston and Stevens (2012) stated “habitat diversity is high and includes a community sequence including un-vegetated tidal flats, saltmarsh, seagrass (on the delta area at the mouth), herb-fields, freshwater wetland, and two forest remnants. However, significant areas of saltmarsh and natural vegetated margin have been lost. Currently, saltmarsh occupies 36% of the estuary whereas historically it was approximately 40-50% and much of the terrestrial margin is covered in pines or scrub. In addition, the estuary is excessively muddy (10% soft mud). The inlet is recognised as a valuable nursery area for marine and freshwater fish, an extensive shellfish resource, and is very important for birdlife.” Status species including banded rail, fern-bird, marsh crake, and bittern are present (Walker, 1987).

**Mooring location:** Tidal embayment located on the western side of the spit and within the Otuwhero Estuary proper.

**Proposal:** create new mooring area.

**Existing moorings:** 12 unconsented swing moorings are located within the proposed area. Another 9 moorings are located inside and outside the estuary. Two unconsented fixed moorings are located outside the proposed area.

**Sea protection:** No marine protection.

**Adjacent terrestrial protection/ownership:** Road reserve, private land.

**Terrestrial vegetation:** Residential, regenerating scrub/forest.



**Figure 8. Proposed mooring area in the spit area of Otuwhero Inlet (aerial 2013).**

**Marine habitats inside mooring area:** Intertidal flats are combinations of mobile sand, firm sand, fine sand (see Davidson and Richards 2004, Robertson and Stevens 2012). Based on habitat mapping conducted during the present study, the proposed mooring area is dominated by combinations of medium and coarse sands with dead and broken shell (Figure 9). Areas of mega ripples are located within this habitats zone where currents are strongest. Westwards and also in the small embayment between the spit islands are areas of fine sand/silt. Mud substratum is located at the northern end and extends along the inshore side of the spit northwards towards the main road. A small tidal channel and a number of pools are also present.

**Wildlife:** A variety of birds utilise Otuwhero Inlet (Robertson and Stevens 2012). Robertson and Stevens (2012) rated the estuary as important to birdlife and it is likely this area is utilized by birds, particularly waders and herons. Variable oyster catcher and dotterel may now or may have historically bred in this area. Both are vulnerable to disturbance. During habitat mapping black-backed gull, grey duck and a white-faced heron were observed.

**Human modification:** Robertson and Stevens (2012) stated 28% of the catchment was clad in native forest, 46% in exotic forest, 25% in pasture. Much of the terrestrial vegetation around the immediate edges of the estuary is in an advanced state of regeneration, however residential development and the road often reach the estuarine margin. Historically the area has been cleared of its original vegetation. Areas of saltmarsh have been reclaimed along the western margins. Robertson and Stevens (2012) reported that the

*Specialists in research, survey and monitoring*

estuary was subjected to excess levels of mud derived from the catchment. Estuarine contamination levels have not been established but it is likely they are low compared to estuaries close to larger cities in New Zealand.



**Figure 9. Habitat map for proposed mooring area in Otuwhero Inlet.**

**Proposed mooring area:** The proposed 1.864 ha mooring area is located on the inshore western side of the spit. No sensitive or important habitats have been identified from this area. Robertson and Stevens (2012) recorded the area as firm sand. Davidson and Richards (2004) reported an area of finer sand located within the small embayment to the north-west of the proposed mooring area. Present mapping shows the site is dominated by medium and coarse sands and shell. These substrata are widespread in the estuary.

*Specialists in research, survey and monitoring*

**Recommendations on biological grounds:**

- The sand spits may be utilized by variable oyster catcher and dotterel. Establishment of a mooring area near the tips of the spit may increase or at least maintain the present level of human activity in the area. Positioning of the mooring area should consider the potential for bird disturbance.
- It is suggested that the southern boundary of the proposed mooring area be relocated further northwards and away from the southern parts of the spit where bird use is likely highest.
- Habitats to the north of the proposed mooring area (i.e. mud and fine sands) are widespread in the estuary and would be suitable for consideration to replace the reduced mooring space in the south.

**4.3.4 Kaiteriteri (Abel Tasman Coast)**

Kaiteriteri is composed of the same range of substrata known from the greater Abel Tasman coast (i.e. combinations of sandy beaches, sandy estuaries, and granite rocky coasts) (Davidson 1992). Kaiteriteri is a very high use area with motor camps, shop, restaurants, cafes and adventure operators. Considerable human modification of the bay and estuary has occurred including reclamation, roading and subdivision. The marine biology of the area has, however, had little study. Davidson and Chadderton (1994) established a rocky sample site on a reef near little Kaiteriteri. The authors reported a low biomass of marine algae and high numbers of invertebrate grazers. The authors stated the rocky site was comparable to the granite substrata along the National Park coast.

**Mooring locations:** Subtidal area located in Kaiteriteri Bay.

**Proposal:** Create two new mooring areas and a casual anchoring area.

**Existing moorings:** 20 consented swing moorings are located within the proposed mooring areas with a further two moorings located in the casual anchoring area. Three unconsented swing moorings are located outside the proposed areas.

**Sea protection:** No marine protection.

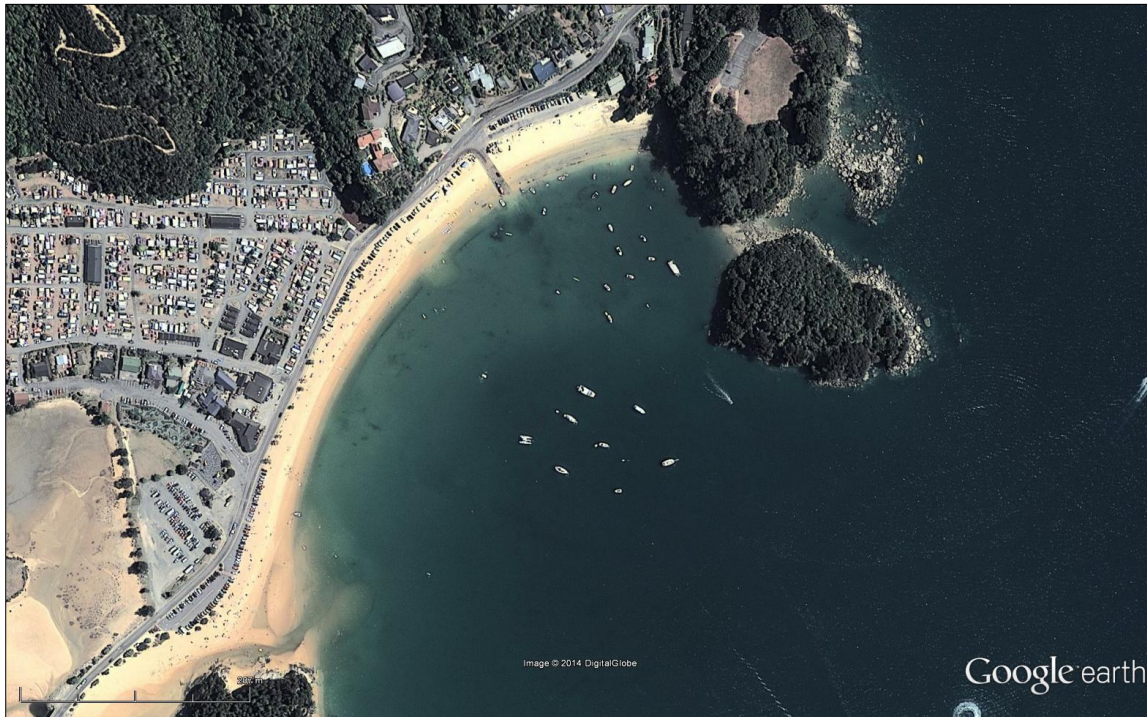
**Adjacent terrestrial protection/ownership:** Recreation reserve, Maori land, private land and road.

**Terrestrial vegetation:** Regenerating scrub/forest, exotic trees and residential plantings.

**Marine habitats inside mooring area:** Subtidal (unknown soft substrata, probably shelly/fine sand/mud). The proposed mooring areas have not been biologically surveyed.

*Specialists in research, survey and monitoring*

**Wildlife:** A variety of birds utilise the adjacent rocky coast (e.g. reef heron, oyster catcher) and offshore waters (terns, gulls), however the areas is moderate to low importance compared to other bird habitats located along the Abel Tasman coast.



**Figure 10. Kaiteriteri and headland (January 2013).**

**Human modification:** Most of the terrestrial vegetation around the adjacent headland and island is regenerating. The coast to the north is highly modified by a road, car parks, ramp, and residential housing. Contamination levels along the Abel Tasman coast are relatively low compared to coastal areas near larger towns and cities (Davidson and Freeman 2013) No testing has occurred at Kaiteriteri, but there is a possibility of some contamination originating from boat hulls and the adjacent modified catchment.

**Proposed mooring area:** The proposed mooring areas extend over relatively low gradient soft substratum. This habitat type is widespread along inshore areas of the Abel Tasman coast. No sensitive or important habitat have been identified from Kaiteriteri, however, the area has not been the subject of a biological survey.

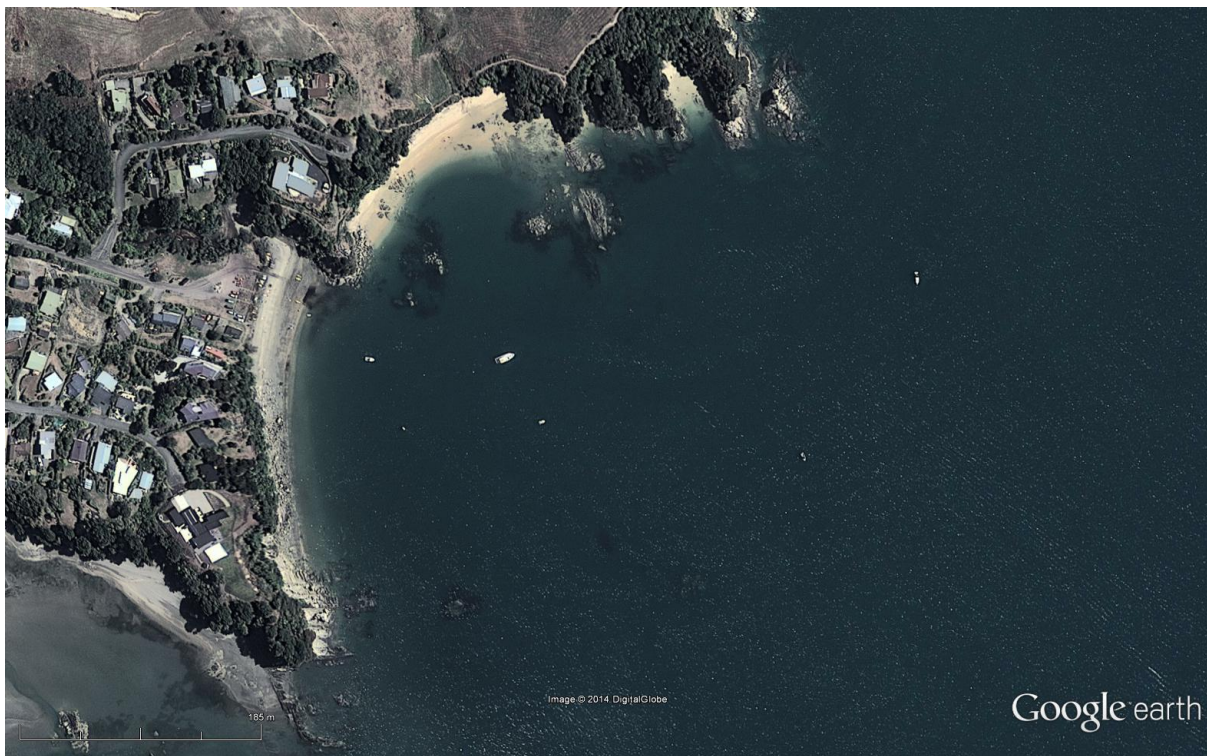
**Recommendations on biological grounds:**

- No modification to the proposed mooring areas is suggested.

*Specialists in research, survey and monitoring*

#### 4.3.5 Stephens Bay (Abel Tasman Coast)

Stephens Bay is composed of the same range of substrata known from the greater Abel Tasman coast (i.e. combinations of sandy beaches, sandy estuarine flats, and granite rocky coasts (Davidson 1992). Stephens Bay has a small car park and is dominated by residential development. Considerable human modification of the catchment has occurred including land clearance, roading and subdivision. The marine biology of the area has, however, had little study. Based on other work along the Abel Tasman coast (Davidson 1992, Davidson and Chadderton 1994, Davidson and Freeman 2013, Davidson and Richards 2014) it is expected that subtidal rocky and soft shore habitats will be comparable to the greater Able Tasman coast and National Park. The existing and proposed mooring areas located in Stephens Bay have not been biologically surveyed.



**Figure 11. Stephens Bay (January 2013).**

**Mooring location:** Subtidal area located in Stephens Bay.

**Proposal:** create a new mooring area offshore of existing mooring area.

*Specialists in research, survey and monitoring*

**Existing moorings:** 8 consented swing moorings in existing mooring area, two consented swing mooring located in proposed mooring area. One consented mooring located inshore of both areas.

**Sea protection:** No marine protection.

**Adjacent terrestrial protection/ownership:** Private land, Council Reserve and road.

**Terrestrial vegetation:** Regenerating scrub, residential plantings.

**Marine habitats inside mooring area:** Subtidal (unknown soft substrata, probably shelly/fine sand/mud).

**Wildlife:** A variety of birds utilise the adjacent rocky coast (e.g. reef heron, oyster catcher) and offshore waters (terns, gulls), however the area is of moderate to low importance compared to other areas along the Abel Tasman coast.

**Human modification:** Most of the terrestrial vegetation around the adjacent headland and island is regenerating. The coast to the north and west is highly modified by a road, car parks, ramp, and residential housing. Contamination levels along the Abel Tasman coast are relatively low compared to coastal areas near larger towns and cities (Davidson and Freeman 2013)

**Proposed mooring area:** The proposed mooring area extends over relatively low gradient soft substratum. This habitat type is widespread along inshore areas of the Abel Tasman coast. No sensitive or important habitat have been identified from Stephens Bay, however, the area has not been the subject of a biological survey.

**Recommendations on biological grounds:**

- No modification to the proposed mooring area is suggested on biological grounds.

#### 4.3.6 Tapu Bay (Abel Tasman coast)

Robertson and Stevens (2012) included this area into a larger unit encompassing the Motueka Estuary delta. The authors described the coastal intertidal flats as “consisting of a short, narrow and shallow tidal river mouth estuary that discharges onto a broad delta (~700 ha), with associated tidal lagoon estuaries located to the north (Riwaka 15 ha) and south (Motueka 76 ha). The river mouth estuary and delta has a high freshwater inflow and, as a consequence, is not very susceptible to having water and sediment quality problems. A series of islands and spits occupy the delta area and includes discharges from other smaller



*Specialists in research, survey and monitoring*

streams and rivers (e.g. Riwaka River). At low tide, most of the estuary/delta consists of exposed sandy or cobble tidal flats. Much of the Motueka catchment is forest, with pastoral use at 16%. The majority of the sediment and nutrient load from the river is discharged and settles into the subtidal plume area in Tasman Bay (Tuckey *et al.* 2006)."



**Figure 12. Tapu Bay area with proposed mooring indicated in red (January 2011).**

With respect to ecological values Roberston and Stevens (2012) stated "Ecologically, habitat diversity is moderate with much of its intertidal vegetation intact, and moderate areas of saltmarsh (4.3% of estuary) and herbfield (3.5%) (Tuckey *et al.* 2004). However, the natural vegetated margin of the greater Motueka delta flats has been lost and is now developed for grazing. Also, since 1947 at least 33ha of saltmarsh has been drained and converted to pasture. Evidence also indicates a further loss of 200-300 ha prior to 1947 (Tuckey *et al.* 2004). The estuary/delta is recognised as a valuable nursery area for marine and freshwater fish, is rich in shellfish, and a major feeding ground for wading birds."

*Specialists in research, survey and monitoring*

**Mooring location:** Tidal flats located north-east of the Riwaka River channel.

**Proposal:** create new mooring area.

**Existing moorings:** 7 unconsented swing moorings are located within the proposed area. Another 8 unconsented moorings are located outside the proposed mooring area.

**Sea protection:** No marine protection.

**Adjacent terrestrial protection/ownership:** Private land, Council Reserve.

**Terrestrial vegetation:** Residential, regenerating fringe.

**Marine habitats inside mooring area:** The proposed mooring area is dominated by expansive intertidal flats composed of combinations of sand, fine sand and silt substrata (Figure 13). A small tidal channel is present in the south-eastern corner of the proposed mooring site. This channel supports eelgrass. Eelgrass is also present along the northern parts of the proposed mooring area (Figure 13).



**Figure 13. Habitats from the proposed mooring area in Tapu Bay.**

**Wildlife:** A variety of birds utilise the Motueka delta (Robertson and Stevens 2012). Robertson and Stevens (2012) rated the estuarine flats as very important to birdlife and it is likely this area is utilized by birds, particularly waders and herons. During habitat mapping a

*Specialists in research, survey and monitoring*

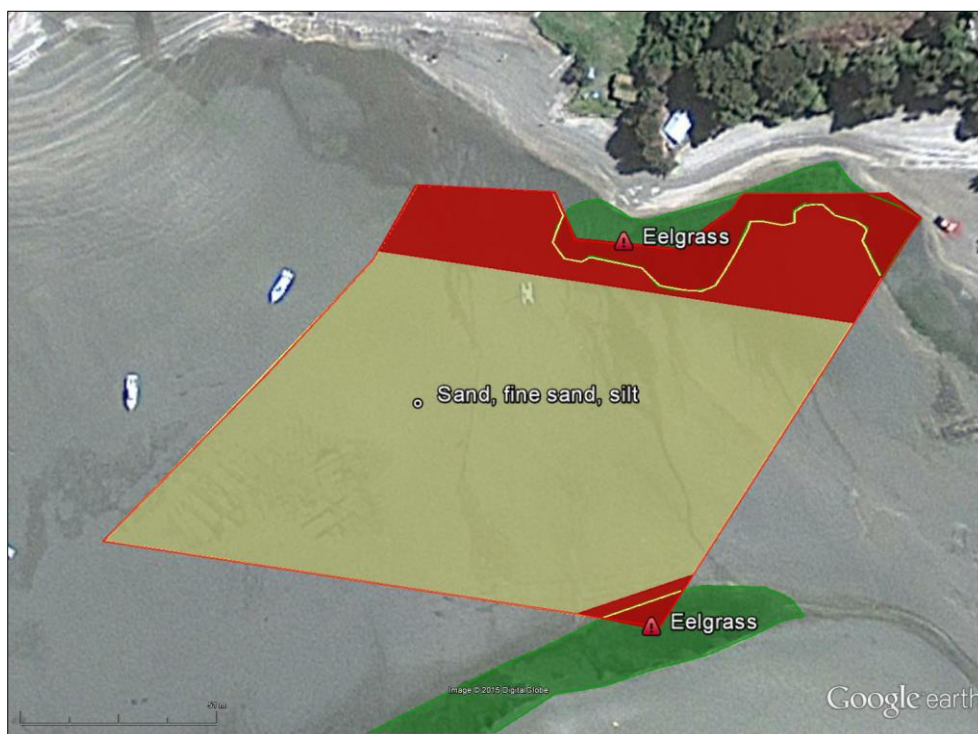
total of 7 black-backed gulls and 1 pied oyster catcher were observed within the mooring area, however it is likely more waders would be present as the tide rises and falls over flats.

**Human modification:** Much of the terrestrial vegetation around the immediate edges of the estuarine flats has been developed for residential sections. A fringe of native scrub/forest exists around much of the coastal margins. Historically the area has been cleared of its original vegetation. Little or no reclamation has occurred in this bay. Estuarine contamination levels have not been established, but it is likely they are low compared to estuaries close to larger cities in New Zealand.

**Proposed mooring area:** The proposed mooring area is relatively large and is entirely intertidal. The areas of eelgrass located along the south eastern boundary and the northern side of the mooring area are biologically important. Robertson and Stevens (2012) coarse scale habitat map recorded the area as mobile and firm sand and the present mapping confirms the area is dominated by firm sands, fine sands and a small component of silt. This substrata type is widespread in the Motueka to Riwaka sand flats.

**Recommendations on biological grounds:**

- Exclude eelgrass habitats from the proposed mooring area (Figure 14).



**Figure 14. Suggested areas to remove from the proposed mooring area (red).**

*Specialists in research, survey and monitoring*

## 4.4 Tasman Bay coast

### 4.4.1 Moutere delta (Tasman Bay)

Robertson and Stevens (2012) described this area as part of the Moutere Inlet and adjacent delta. The authors described the intertidal flats in the Moutere delta as “an extensive coastal tidal flat delta (243ha) located inshore of the Motueka sandspit. Much of the sheltered tidal flat area inside the spit consists of soft mud, backed by the highly modified Motueka beachfront (seawalls, roads and houses).” The spit and associated delta supports extensive beds of cockles, pipi, and tuatua being major feeding grounds for wading birds (Walker 1987).



**Figure 15. Moutere Inlet sand spit delta (right) and Moutere Inlet mooring locations (left) (aerial 2011).**

**Mooring location:** Tidal flats and shallow channel inside the Motueka sand spit.

**Proposal:** create new mooring area.

*Specialists in research, survey and monitoring*

**Existing moorings:** 17 unconsented swing moorings are located within the proposed area. Another 13 unconsented moorings are located outside the proposed mooring area.

**Sea protection:** No marine protection.

**Adjacent terrestrial protection/ownership:** Private land, road.

**Terrestrial vegetation:** Residential plantings, scrub and grassed fringe.

**Marine habitats inside mooring area:** Intertidal flats dominated by firm fine sand and silt substrata. A shallow tidal channel is located offshore of the proposed mooring area.

**Wildlife:** A variety of birds utilise the Motueka sand spit and delta (Robertson and Stevens 2012). Robertson and Stevens (2012) rated the estuarine flats and sand spit as very important to birdlife and it is likely this area is utilized by birds, particularly waders and herons.

**Human modification:** Much of the terrestrial vegetation around the immediate edges of the estuarine flats has been developed for residential sections. Historically the area has been cleared of its original vegetation and a variety of protection works have been installed at and above high water (Plate 5). Reclamation has likely occurred in this area and also the wider estuarine area around Moutere Inlet (Tuckey *et al* 2004). Estuarine contamination levels are low (Gillespie and Clark 2006).



**Plate 5. Moutere delta erosion protection.**

*Specialists in research, survey and monitoring*

**Proposed mooring area:** The proposed mooring area consists of intertidal flats adjacent to the offshore subtidal channel. No sensitive or important habitats have been identified from this area. Robertson and Stevens (2012) coarse habitat map recorded the area as mud with small fringe areas of coarser substrata. Habitat mapping conducted during the present study confirms the area is dominated by relatively uniform firm fine sand with a component of silt that increases towards the north.

**Recommendations on biological grounds:**

- The Motueka sand spit and delta is recognised as an important area for wading birds. The positioning of a new mooring therefore needs careful consideration. No detailed data on bird use has been produced for the proposed mooring area. In light of the areas importance to birds and the lack of data, it is suggested that this area be rejected as a new mooring location until such time as information of bird use/importance is produced and assessed.
- Based on substrata present at the site, no modifications to the proposed mooring area are recommended.

#### 4.4.2 Moutere Inlet marina (Tasman Bay)

Robertson and Stevens (2012) described Moutere Inlet as “a moderate-sized (762 ha), shallow, well-flushed, seawater-dominated, tidal lagoon type estuary with two tidal openings, one main basin, several tidal arms separated by causeways.” Further they stated “ecologically, habitat diversity is moderate but significant areas of high value habitat have been lost. Currently, saltmarsh occupies 8% of the estuary and seagrass 0.1%. Prior to 1947, saltmarsh was double the current area (Clark and Gillespie 2006). In addition, the estuary is excessively muddy (22% is soft mud), particularly the sheltered delta basin, and the natural vegetated margin has been lost and is now developed for grazing and horticulture (Clark *et al.* 2006). The inlet is recognised as a valuable nursery area for marine and freshwater fish, an extensive shellfish resource, and is important for birdlife. Toxicant indicators (heavy metals) are low (Gillespie and Clark 2006).”

**Mooring location:** Tidal flats and shallow channel west of Moutere marina.

**Proposal:** Reduce the size of the current mooring area.

**Existing moorings:** Approximately 24 unconsented swing moorings are located within the existing mooring area. Another 2 consented moorings are also located inside the reduced mooring area.

**Sea protection:** No marine protection.

*Specialists in research, survey and monitoring*

**Adjacent terrestrial protection/ownership:** Private land, marina, Talley's facility, road.

**Terrestrial vegetation:** Residential plantings, horticulture, grassed fringe.

**Marine habitats inside mooring area:** Intertidal flats are dominated by mud (see Robertson and Stevens 2012). Based on habitat mapping conducted during the present study, a cobble and pebble area is located around the fringe of the offshore island. This hard substrata connects with a man-made bank of similar substrata that extends along the western side of the channel that drains the northern embayment cut off by the road causeway (Figure 16). Pools form part of the proposed mooring area. The small island to the south-west of the mooring area supports estuarine plants, however these are located outside of the mooring area.

**Wildlife:** Waders are the most likely species to utilize this area, however the level of use is likely to be moderate to low compared to the Motueka sand spit and Moutere Delta. During habitat mapping, 7 oyster catchers and one white faced heron were observed feeding in the mooring area. Of note was the presence of 5 spoonbills roosting in a pine tree located on the small island. It is likely they also feed in this area on occasion.

**Human modification:** Most of the terrestrial area around the immediate eastern edges of the estuarine flats has been developed for the Moutere marina and causeway. Historically the area has been cleared of its original vegetation. Reclamation has likely occurred in this area and also the wider estuarine area around Moutere Inlet (Tuckey *et al*, 2004). Estuarine heavy metal contamination levels are low (Gillespie and Clark 2006).

**Proposed mooring area:** The proposed reduction to the existing mooring area represents a relatively large reduction. The reduced area supports a range of tidal heights and includes areas of herb field. Substrata in the reduced mooring areas are found throughout the inlet.

**Recommendations on biological grounds:**

- No modifications to the proposed mooring area to avoid habitats or species of interest are suggested.
- The proposed reduction to the considerably larger existing mooring area represents a biological improvement as it removes large areas of herb field vegetation from the mooring area.



**Figure 16. Habitat map for the Moutere Inlet proposed mooring area.**



#### 4.4.3 Mapua Channel and Grossi Point (Waimea Inlet)

Robertson and Stevens (2012) described Waimea Inlet as “a large (3,345 ha), shallow, well-flushed, seawater-dominated, tidal lagoon type estuary with two tidal openings, two main basins, and several tidal arms. Catchment land use is mixed with forest occupying 69% and prime pastoral 20%.” The authors stated “ecologically, habitat diversity is high with much of its intertidal vegetation intact, moderate areas of saltmarsh (10% of estuary), some seagrass (1% of the estuary, located predominantly in the eastern basin near Saxton Island) and a small subtidal sponge-dominated community (by Rough Island). However, a large proportion of the estuary is soft muds (55%) and most of the natural vegetated margin has been lost and is now developed. Also, since 1946 at least 83 ha of saltmarsh has been reclaimed and developed. The invasive weed, *Spartina anglica*, occupied large areas of the estuary in the 1980’s (40-50 ha in 1985) after it was introduced to promote reclamation and stabilisation of soft muds entering from the catchment. In the early 1990’s, it was eradicated. Despite the muddy nature of the estuary sediments, the inlet is recognised as a valuable for birdlife, nursery area for marine and freshwater fish, and shellfish.

**Mooring locations:** Mapua Channel and west of Grossi Point.

**Proposal:** An existing mooring area is located in the Mapua main channel and tidal flats extending to Grossi Point. A reduction of intertidal areas has been proposed. New mooring areas are proposed for (a) the main channel and (b) west of Grossi Point.

**Existing moorings:** Approximately 19 consented swing moorings are located within the existing mooring area. Another 11 consented moorings are located in the new proposed mooring areas. Four unconsented moorings are located inside the new proposed mooring areas.

**Sea protection:** No marine protection.

**Adjacent terrestrial protection/ownership:** Private land, wharf and building, ramp, road, Council land.

**Terrestrial vegetation:** Residential plantings, grassed fringes, forestry, regenerating scrub.

**Marine habitats inside new mooring areas:** A small area of intertidal flat is located in the area west of Grossi Point (mud see Robertson and Stevens 2012). The remainder of the newly proposed mooring areas is subtidal channel.

*Specialists in research, survey and monitoring*

**Wildlife:** Waders and herons are the most likely species to utilize this area. Highest use areas are located in the intertidal flats located between the southern-most proposed mooring areas. Bird use in this area is high.



**Figure 11. Mapua Channel and Grossi Point (December 2012).**

**Human modification:** Most of the terrestrial area around the immediate edges of the estuarine flats has been developed for the Mapua settlement. Historically the area has been cleared of its original vegetation. Heavy metal, herbicide and pesticide contamination levels in the estuarine sediments are patchy and range from low to high (CH2M Hill 2007, Davidson *et al.* 2010, 2011, 2012).

**Proposed mooring area:** The proposed reduction to the existing mooring area is relatively large and removes much of the intertidal areas along the Mapua channel. The reduced area supports a range of tidal heights and includes small areas of herb field.

*Specialists in research, survey and monitoring*

The new proposed mooring areas are located in the current swept tidal channel. This channel has not been sampled, however, Davidson and Moffat (1990) sampled the Nelson airport Channel. These authors reported high densities of subtidal shellfish.

The southernmost new proposed mooring and the new mooring west of Grossi Point are located close to important wader habitats. A status species of marine plant is also known from the island adjacent to these southern moorings.

**Recommendations on biological grounds:**

- Removal of intertidal habitats located represents a positive step, however new mooring areas located in the south come close to habitats of high value.
- The impact of the existing moorings in a high current habitat is unknown. High current subtidal estuarine habitats are relatively uncommon and usually support a high density of particular species.
- A study investigating the subtidal habitats of the main Mapua Channel is recommended. The study should also investigate the impact of existing moorings on current swept tidal habitats.

## References

- CH2M HILL, 2007. Groundwater and sediment investigation report, former Fruitgrower Chemical Company site, Mapua. Report prepared for Ministry for the Environment.
- Clark, K., Stevens, L., and Gillespie P. 2006. Broad scale mapping of Moutere Inlet. Prepared for Tasman District Council. Cawthron Report No. 1037. 19p.
- Clark, K. and Gillespie P. 2006. Historical broad scale mapping of Moutere Inlet (1947, 1988 and 2004). Prepared for Tasman District Council. Cawthron Report No. 1234. 19p.
- Davidson, R.I. 1992. A report on the intertidal and shallow subtidal ecology of the Abel Tasman National Park, Nelson. Department of Conservation, Nelson/Marlborough Conservancy. Occasional Publication No.4, 161pp.
- Davidson, R.J. 1990. A report on the ecology of Whanganui Inlet, North-west Nelson. Department of Conservation, Nelson/Marlborough Conservancy. Occasional Publication, No.2. 133 pp.
- Davidson, R.J.; Richards, L.A. 2013. Tonga Island Marine Reserve, Abel Tasman National Park update of biological monitoring, 1993 – 2013. Prepared by Davidson Environmental Limited for Department of Conservation, Nelson. Survey and Monitoring Report No. 771.
- Davidson, R.J.; Freeman D. 2013: Report on trial candidate indicators for assessing ecological integrity (EI) at Tonga Island Marine Reserve and adjacent coast. Prepared by Davidson Environmental Limited for Department of Conservation, Wellington. Survey and Monitoring Report No. 772.
- Davidson, R.J.; Richards, L.A.; Easton, J. 2012. Post-remediation contaminant monitoring of sediments and biota from estuarine sites located adjacent to the former Fruitgrowers Chemical Company (FCC) site, Mapua, Nelson (sample 3). Prepared by Davidson Environmental Limited for Tasman District Council and Ministry for the Environment. Survey and monitoring report 710.
- Davidson, R.J.; Richards, L.A.; Easton, J. 2011. Post-remediation monitoring of sediments and biota from estuarine sites located adjacent to the former Fruitgrowers Chemical Company (FCC) site, Mapua, Nelson (sample 2). Prepared by Davidson Environmental Limited for Tasman District Council and Ministry for the Environment. Survey and monitoring report 680.
- Davidson, R. J.; Richards, L.A.; Easton, J. 2010. Post-remediation monitoring of sediments and biota from estuarine sites located adjacent to the former Fruitgrowers Chemical Company (FCC) site, Mapua, Nelson. Prepared by Davidson Environmental Limited for Tasman District Council and Ministry for the Environment. Survey and monitoring report no. 616.
- Davidson, R. J.; Richards, L. 2004: Biological baseline report in relation to sand extraction and deposition at Marahau. Prepared by Davidson Environmental Ltd. for Molineux Project Development Ltd. Survey and Monitoring Report No. 452.

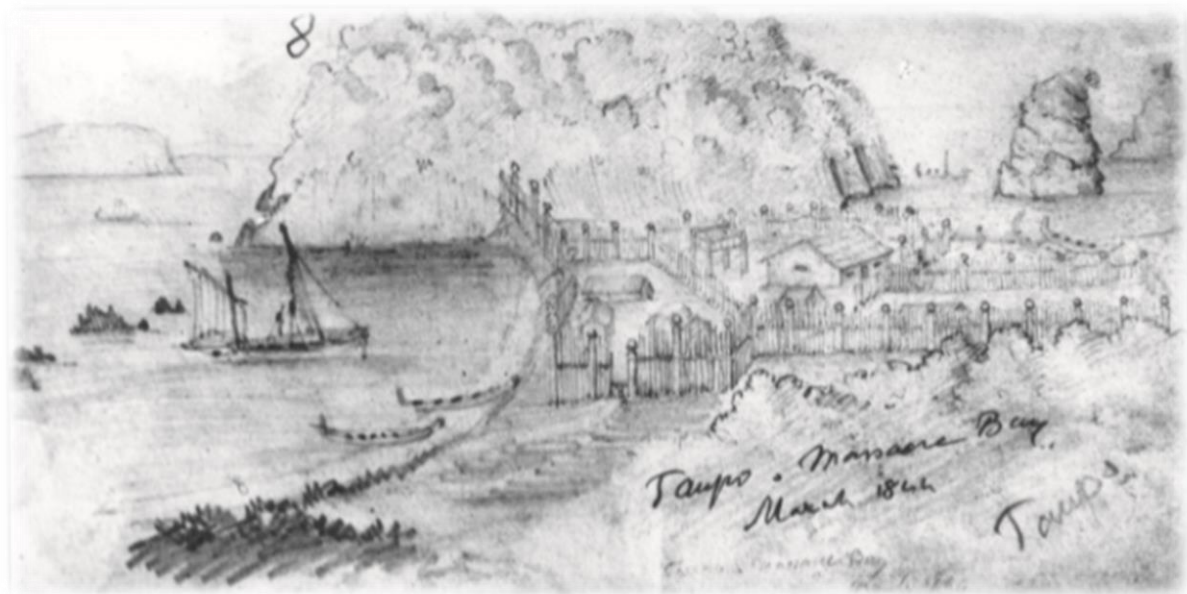
*Specialists in research, survey and monitoring*

- Davidson, R.J.; Chadderton, W.L., 1994. Marine reserve selection along the Abel Tasman National Park coast, New Zealand: consideration of subtidal rocky communities. *Aquatic Conservation: Freshwater and marine ecosystems* Vol. 4, 153-167.
- Davidson, R.J.; Stark, K.E.; Preece, J.R.; Lawless, P.F.; Clarke, I.E. 1993: Internationally and nationally important coastal areas from Kahurangi Point to Waimea Inlet, Nelson, New Zealand: Recommendations for protection. Department of Conservation. Nelson/Marlborough Conservancy, Occasional Publication No 14, 121 p.
- Davidson, R.J. and C.R. Moffat. 1990. A report on the ecology of Waimea Inlet, Nelson. Department of Conservation, Nelson/Marlborough Conservancy, Occasional Publication No.1. 160 p.
- Demers, M. A., Davis, A. R. & Knott, N. A. 2013. A comparison of the impact of 'seagrass-friendly' boat mooring systems on *Posidonia australis*. *Marine Environmental Research*, 83 (N/A), 54-62.
- Knox. G.A.; Bolton, L.A.; Hackwell, K. 1977. Report on the necology of Parapara Inlet, Golden Bay. University of Canterbury Estuarine Report No 11. 66p.
- Elliott, G. 1989. The distribution of banded rails and marsh crakes in coastal Nelson and the Marlborough Sounds. *Notornis* 36: 117-123.
- Gillespie, P. and Clark, K. 2006. Moutere Inlet fine scale benthic baseline 2006. Prepared for Tasman District Council. Cawthron Report No. 1183.18p.
- Hastings, K., Hesp, P. and Kendrick, G.A. 1995. Seagrass loss associated with boat moorings at Rottneest Island, Western Australia, *Ocean & Coastal Management* 26 (3), 225–246.
- Herbert, R.J.H.; Crowe, T.P.; Bray, S.; Sheader, M. 2009. Disturbance of intertidal soft sediment assemblages caused by swinging boat moorings. *Hydrobiologia* 625:105-116.
- Melville, D.S. 2002. A preliminary review of potential human disturbance impacts to birds with reference to the internationally important Waimea Inlet, Nelson, New Zealand. The Ornithological Society of New Zealand, submitted to Tasman District Council. 25 pp.
- Miskelly, C. M.; Dowding, J.E.; Elliott, G.P.; Hitchmough, R.A.; Powlesland, R.G.; Robertson, H.A.; Sagar, P.M.; Scofield, R.P.; Taylor, G.A..2008. Conservation status of New Zealand birds, 2008. *Notornis* 55: 117-135.
- Montefalcone, M., Chiantore, M., Lanzone, A., Morri, C., Albertelli, G. and Bianchi, C.N. 2008. BACI design reveals the decline of the seagrass *Posidonia oceanica* induced by anchoring, *Marine Pollution Bulletin* 56 (9), 1637–1645.
- Morrison, M.A.; Jones, E.G.; Consalvey, M; Berkenbusch, K. 2014a. Linking marine fisheries species to biogenic habitats in New Zealand: a review and synthesis of knowledge New Zealand Aquatic Environment and Biodiversity Report No. 130.
- Morrison, M.A.; Jones, E.; Parsons, D.P.; Grant, C. 2014b. Habitats and areas of particular significance for coastal finfish fisheries management in New Zealand: A review of concepts and current knowledge, and suggestions for future research. New Zealand Aquatic Environment and Biodiversity Report 125.202 p.
- Schuckard, R.; Melville, D. S. 2013. Shorebirds of Farewell Spit, Golden Bay and Tasman Bay. Prepared for Nelson City Council and Tasman District Council.

*Specialists in research, survey and monitoring*

- Stevens, L., and Robertson, B. 2008. Motupipi Estuary 2008 Broad Scale Habitat Mapping. Prepared for Tasman District Council. 27p + appendices.
- Robertson, B.; Stevens, L. 2012. Waimea Inlet to Kahurangi Point Habitat Mapping, Ecological Risk Assessment, and Monitoring Recommendations. Prepared for Tasman District Council by Wriggle Ltd.
- Robertson, B.; Stevens, L. 2009. State of the Environment Report Estuaries of Tasman District. Prepared for Tasman District Council by Wriggle Ltd.
- Robertson, B.; Stevens, L. 2008. Motupipi Estuary. Vulnerability assessment and monitoring recommendations. Prepared for Tasman District Council by Wriggle Ltd.
- Robertson, B.M., and Stevens, L. 2008b. Motupipi Estuary 2008 Fine Scale Monitoring. Prepared for Tasman District Council. 20p
- Robertson, B., Tuckey, B., and Gillespie, P. 2003. Broad scale mapping of Motueka River intertidal delta habitats. Cawthron Report No. 782
- 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. 22p.
- Tuckey, B.J., Robertson, B.M., 2003. Broad Scale Mapping of Waimea and Ruataniwha Estuaries using Historical Aerial Photographs. Cawthron Report No. 828. Prepared for Tasman District Council. 28p.
- Tuckey, B., Robertson, B., and Strickland., R. 2004. Broad Scale Mapping of Motueka River Intertidal Delta Habitats using Historical Aerial Photographs. Cawthron Report No. 903.
- Walker, K. 1987. Wildlife in the Nelson Region. Fauna Survey Unit Report No. 42. New Zealand Wildlife Service.
- Walker D. I., Lukatelich R. J., Bastyan G. and McComb A. J. 1989. Effect of boat moorings on seagrass beds near Perth, Western Australia, Aquatic Botany 36 (1), 69–77.
- Young, R.G., Quarterman, A.J., Eyles, R.F., Smith, R.A., Bowden, W.B. 2005. Water quality and thermal regime of the Motueka River: influences of land cover, geology and position in the catchment. New Zealand Journal of Marine and Freshwater Research 39: 803–825.

# Assessment of Effects on Historic Heritage Values in Tasman



Source: Taupo Pa, Massacre Bay, 1844. Copy of a drawing by J W Barnicoat. Bett Collection, Nelson Provincial Museum.

- Tania Bray, November 2018

# Contents

<b>1. Assessment of the Impacts of the Proposed Coastal Plan</b>	
<b>Change on Historic Heritage .....</b>	<b>1</b>
<b>1.1 Introduction .....</b>	<b>1</b>
<b>1.2 Legislative Context .....</b>	<b>1</b>
1.2.1 Resource Management Act 1991 .....	1
1.2.2 New Zealand Coastal Policy Statement (2010).....	1
1.2.3 Tasman Regional Policy Statement .....	2
1.2.4 Tasman Resource Management Plan (which includes the Regional Coastal Plan) .....	3
1.2.5 Heritage New Zealand Pouhere Taonga Act 2014.....	3
1.2.6 Iwi .....	3
<b>1.3 Method .....</b>	<b>4</b>
<b>1.4 Executive Summary .....</b>	<b>4</b>
1.4.1 Proposed Mooring Areas.....	4
1.4.2 Removal of Coastal Structures- Policies, Objectives and Rules.....	4
<b>1.5 Background Information.....</b>	<b>4</b>
1.5.1 History.....	4
1.5.2 Effects of Moorings and structure removal on Historic Heritage .....	5
<b>2. Assessment of Effects of the Proposed Mooring Areas on Heritage Values.....</b>	<b>7</b>
<b>2.1 Mooring Area 1 – Mapua.....</b>	<b>7</b>
2.1.1 Archaeological Sites .....	7
2.1.2 Settler History .....	8
2.1.3 Impact on the Heritage Values .....	8
<b>2.2 Mooring Area 2: Motueka 1 .....</b>	<b>8</b>
2.2.1 Archaeological Sites .....	8
2.2.2 Settler History .....	8
2.2.3 Impact on the Heritage Values .....	8
<b>2.3 Mooring Area: Motueka 2 .....</b>	<b>9</b>
2.3.1 Archaeological Sites .....	9
2.3.2 Settler History .....	9
2.3.3 Impact on Heritage Values .....	10
<b>2.4 Mooring Areas: Tapu Bay and Stephens Bay.....</b>	<b>10</b>
2.4.1 Archaeological Sites .....	10
2.4.2 Settler History .....	11
2.4.3 Impact on Heritage Values .....	11



<b>2.5</b>	<b>Mooring Area: Kaiteriteri .....</b>	<b>11</b>
2.5.1	Archaeological Sites .....	11
2.5.2	Settler History .....	12
2.5.3	Iwi .....	13
2.5.4	Impact on Heritage Values .....	13
<b>2.6</b>	<b>Mooring Area: Otuwhero – Marahau .....</b>	<b>13</b>
2.6.1	Archaeological Sites .....	13
2.6.2	Settler History .....	14
2.6.3	Impact on Heritage Values .....	14
<b>2.7</b>	<b>Mooring Area: Glasgows/Torrent Bay &amp; Boundary Bay .....</b>	<b>15</b>
2.7.1	Archaeological Sites .....	15
2.7.2	Settler History .....	16
2.7.3	Impact on Heritage Values .....	16
<b>2.8</b>	<b>Mooring Area: Milnthorpe.....</b>	<b>17</b>
2.8.1	Archaeological Sites .....	17
2.8.2	Settler History .....	18
2.8.3	Impact on Heritage Values .....	18
<b>2.9</b>	<b>Mooring Area: Mangarakau Wharf.....</b>	<b>19</b>
2.9.1	Archaeological Sites .....	19
2.9.2	Settler History .....	19
2.9.3	Impact on Heritage Values .....	19
<b>3.</b>	<b>Assessment of Effects of the Proposed Policies, Objectives and Rules on Heritage Values .....</b>	<b>20</b>
3.1	Impact on Heritage Values .....	21
3.2	Recommendation .....	21

# 1. Assessment of the Impacts of the Proposed Coastal Plan Change on Historic Heritage

## 1.1 Introduction

This report assesses the impacts of the draft changes to the Tasman Regional Management Plan, on historic heritage. Tasman District Council (Council) intends to establish 12 mooring areas through a plan change which permit the activity of mooring subject to conditions, including the mooring owner holding a mooring licence issued under Tasman District Council's Consolidated Bylaw. The Mooring Licence will specify the location and mooring type among other things. The Mooring Areas are proposed to be located at the following locations: Mapua; Motueka 1; Motueka 2; Tapu Bay; Stephens Bay; Kaiteriteri; Outwhero – Marahau; Glasgows and Torrent Bays; Boundary Bay; Milnthorpe; and Mangarakau Wharf. The plan change also proposes to provide for several pre-existing coastal structures in the Able Tasman National Park as permitted activities and includes a number of new policies and rules regarding removal of and protection of existing coastal structures.

## 1.2 Legislative Context

New Zealand's historic heritage management is shared between central and local government with a range of organisations being involved. Historic Heritage is defined in the Resource Management Act 1991 as those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures. Historic heritage includes historical sites, structures, areas, archaeological sites and sites of significance to Maori and surrounding associated with the natural and physical resources.

### 1.2.1 Resource Management Act 1991

Under section 6(f) of the Resource Management Act 1991 Council is required to protect historic heritage from inappropriate subdivisions, use and development as a matter of national importance.

Under Section 12(g) No person may “destroy, damage, or disturb any foreshore or seabed...in a manner that has or is likely to have an adverse effect on historic heritage – Unless expressly allowed by... a rule in a regional coastal plan... or a resource consent.”

The Resource Management Act 1991 (s66(2)) also requires local authorities to have regard to any relevant entry in the New Zealand Heritage list and the Council is required to have particular regard to any recommendations from Heritage New Zealand concerning the conservation and protection of a historic or wahi tapu area.

When drafting a plan change under the Resource Management Act 1991 Council is required to consider the effects that the plan change may have on historic heritage and to ensure that historic heritage is protected.

### 1.2.2 New Zealand Coastal Policy Statement (2010)

More explicit guidance on how to achieve the requirements of the Resource Management Act 1991 for the coastal marine area is provided through the New Zealand Coastal Policy Statement (2010). The Supreme Court found in 2014 that Councils need not consider Part II of the RMA (e.g. 6(f)) when making decisions on plan changes where the matter is fully addressed in the New Zealand Coastal Policy Statement (NZCPS). For this reason the assessment in this report focuses on the objectives and policies of the NZCPS, rather than the provisions in Part II of the Resource Management Act 1991. The relevant Objectives and Policies of the NZCPS are as follows<sup>1</sup>:

---

<sup>1</sup> <https://www.doc.govt.nz/globalassets/documents/conservation/marine-and-coastal/coastal-management/guidance/policy-17.pdf>

*Objective 3: to take account of the principles of the Treaty of Waiangi, recognise the role of tangata whenua as kaitiaki and provide for tangata whenua involvement in management of the coastal environment by:... recognising and protecting characteristics of the coastal environment that are of special value to tanagta whenua.*

*Objective 6: to enable people and communities to provide for their social, economic, and cultural wellbeing and their health and safety, through subdivision, use, and development, recognising that: ... -historic heritage in the coastal environment is extensive but not fully known, and vulnerable to loss or damage from inappropriate subdivisions, use, and development.*

*Objection 7: to ensure that management of the coastal environment recognises and provides for New Zealand's international obligations regarding the coastal environment, including the coastal marine area.*

*Policy 5: focuses on considering and managing the effects on land and waters in the coastal environment held or managed under other Acts for conservation or protection purposes; and have regard to the purpose for which the water is are held or managed. This includes historic reserves, marine reserves and archaeological sites.*

*Policy 6. Activities in the coastal environment ...(1)(j) where appropriate, buffer areas and sites of significant indigenous biological diversity, or historic heritage.*

*Policy 7: Strategic Planning ... consider where, how and when to provide for... and other activities in the coastal environment at a regional...level... identify areas of the coastal environment where particular activities and forms of ...use... are inappropriate... and provide protection from inappropriate... use... in these areas through objectives, policies and rules.*

*Policy 17: Historic heritage identification and protection – Protect historic heritage in the coastal environment from inappropriate subdivisions, use and development by:*

- (a) Identification, assessment and recording of historic heritage, including archaeological sites;*
- (b) providing for the integrated management of such sites in collaboration with relevant councils, heritage agencies, iwi authorities and kaitiaki;*
- (c) Initiating assessment and management of historic heritage in context of historic landscapes;*
- (d) Recognising that heritage to be protected may need conservation;*
- (e) Facilitating and integrating management of historic heritage that spans the line of mean high water springs;*
- (f) Including policies, rules and other methods relating to (a) to (e) above in regional policy statements, and plans;*
- (g) Imposing or reviewing conditions on resource consents and designations, including of the continuation of activities;*
- (h) Requiring, where practicable, conservation conditions; and*
- (i) Considering provisions for methods that would enhance owners' opportunities for conservation of listed heritage structures, such as relief grants or rates relief.*

### **1.2.3 Tasman Regional Policy Statement**

Purpose of the Tasman Regional Policy Statement is to promote the sustainable management of natural and physical resources, by providing an overview of the resource management issues facing Tasman, and setting policies and methods to manage Tasman's natural and physical resources. The Tasman Regional Policy Statement was written prior to the 2010 New Zealand Coastal Policy Statement, but similarly requires:

*General Objective 6 - Protection and enhancement of significant natural, heritage and cultural values of resources.*

*Policy 4.2 - Council will seek protection of wahi tapu, water, ancestral lands, sites, coastal resources and other taonga from disturbance or contamination in a manner consistent with*

*tangata whenua kaupapa and tikanga while acknowledging the significance of private interests in land and other resources users.*

*Objective 9.6 - Coastal land use and development that avoids, remedies or where appropriate mitigates adverse effects on: ... (iv) heritage values.*

*Policy 9.3 - The Council will provide for activities in the coastal marine area, while avoiding, remedying or mitigating their adverse effects: ... (ii) the amenity values of the locality, including heritage values;*

#### **1.2.4 Tasman Resource Management Plan (which includes the Regional Coastal Plan)**

The purpose of the regional coastal plan is to assist Council in achieving the sustainable management of the coastal environment. To ensure consistency and integration of the management of the coastal environment throughout New Zealand, regional coastal plans must give effect to the New Zealand Coastal Policy Statement (NZCPS). The Tasman Resource Management Plan was written in accordance with the provisions of the previous New Zealand Coastal Policy Statement (1995).

The Tasman Resource Management Plan contains one cultural heritage objective and three policies for the coastal marine area. The objective is reasonably general and two of the three policies are site specific to Pariwhakaoho and not relevant to the plan change.

*Objective 21.5.2 Maintenance of the cultural heritage values of items, sites or areas in the coastal marine area, including taonga of the tangata whenua.*

*Policy 21.5.3.3 To ensure that no historical heritage item in the coastal marine area is in danger to navigation.*

The Tasman Resource Management Plan lists three historic heritage structures within the coastal marine area - the Onekaka Wharf and Tramline, Mapua wharf building and the Motueka stone wharf. None of these sites are within the proposed mooring areas.

#### **1.2.5 Heritage New Zealand Pouhere Taonga Act 2014**

Under the Heritage New Zealand Pouhere Taonga Act 2014, Heritage New Zealand has statutory responsibility for archaeological sites. The Act defines an archaeological site as a place associated with pre 1900 human activity, where there may be evidence relating to the history of New Zealand. The Heritage New Zealand Pouhere Taonga Act 2014 makes it unlawful for any person to modify, or cause to be modified or destroy any archaeological site without prior authority of Heritage New Zealand. The coast of Tasman has many known and unknown archaeological sites reflecting the long history of Maori and more recently European use. The impact of development on archaeological sites is a matter that needs to be taken into consideration when drafting a plan change.

Heritage New Zealand also maintains a list of nationally important historic heritage sites and structures. The Motueka Saltwater Baths as well as the Onekaka Wharf and Tramline, Mapua wharf building and the Moteuka stone wharf are on the New Zealand Heritage List. Protection for listed sites is usually provided through Council resource management plans.

#### **1.2.6 Iwi**

The Resource Management Act 1991 and Heritage New Zealand Pouhere Taonga Act 2014 provides for the relationship of Maori with their ancestral lands, water, wahi tapu sites and other taonga. Recognition and protection of Maori heritage is a fundamental to the management of historic heritage in New Zealand. Consultation with Maori regarding cultural heritage and consideration of iwi management plans is being undertaken separately and is not addressed in this document.

## 1.3 Method

This assessment has largely been based on information gained from a literature review and through consultation with Heritage New Zealand. As mentioned above discussions with iwi are ongoing and specific cultural impacts (if any) are not included in this report. It should be noted that consultation with iwi to date has not raised any specific issues regarding cultural heritage at the 12 sites.

Literature review:

- Council and other Organisations Publications
- Heritage New Zealand
- Te Tau Ihu Statutory Acknowledgment

## 1.4 Executive Summary

### 1.4.1 Proposed Mooring Areas

Moorings, mooring blocks and the removal of moorings all have the potential to damage or disturb heritage values in or on the seabed, therefore, before establishing mooring areas it is important to assess the potential impacts. An assessment was undertaken regarding the heritage values for each site and the impact the proposed mooring area may have on the site.

Reflecting the maritime history of the area all of the proposed mooring areas occurred in historic occupation areas and had been used for mooring and other maritime activities for a significant length of time. It was considered that the formalising of mooring areas would not adversely affect heritage values at each proposed site. Heritage New Zealand, also expressed no concern regarding the effects of the mooring areas on heritage values. No changes were proposed to the 1<sup>st</sup> draft plan change, regarding the mooring areas.

### 1.4.2 Removal of Coastal Structures- Policies, Objectives and Rules.

The Council is required to protect historic heritage from inappropriate subdivisions, use and development as a matter of national importance. The Council achieves this through the identification of heritage values and protection through provisions in the Plan. When the Plan was first notified in 1996, it was identified that there were few heritage values in the coastal marine area requiring protection and as a consequence there are limited provisions in the Plan regarding coastal heritage. The policies, rules and objective proposed in the plan change are considered consistent with the existing Plan provisions. In 2010, the NZCPS was gazetted and the proposed plan change is required to give effect to the NZCPS including Policy 17 which expressly addressed historic heritage. It is outside of the scope of the proposed plan change to give effect to Policy 17 in its entirety, but is recommended that the proposed wording be broadened to require an assessment of effects on all historic heritage when structures are removed from the coastal marine area.

## 1.5 Background Information

### 1.5.1 History

Tasman was first thought to be settled by Maori around the ninth century. The abundance of seafood, birds and favourable gardening conditions for kūmara made this land sought after and many pa and kainga were established on the river flats and bays within the district, including Mapua, Motueka, Torrent Bay and Parapara. Maori lived communally, usually in kainga or in fortified pa. In more settled times communities lived close to cultivations and other resources, and when their security was threatened they resorted to pa on sites chosen for their view of surrounding countryside and/or sea, their defensibility, and their strategic value<sup>2</sup>. A strong characteristic of traditional Maori lifestyle was its mobility. Whole communities would move for harvests at certain times of the year, for fishing and hunting seasons, for planting crops, for *whanau* or political reasons, and because of conflict or

---

<sup>2</sup> Pa and Kainga, taken from The Prow website on the 14/09/15: <http://www.theprow.org.nz/maori/pa-and-kainga/#.VfZl0mfvL8>

scarce resources. Many kainga were used for only a short part of the year<sup>3</sup> and other areas had long-term occupation. As a result, there is a wealth of archaeological and occupation sites scattered along the Tasman coastline.

Europeans began settling in the top of the South Island in the 1820's, initially whalers who were then followed in the 1840s by permanent colonial settlers. Many Maori settlements were abandoned during this time so the Maori could take advantage of the opportunities provided by trade with the settlers<sup>4</sup>. Both European and Maori goods and produce continued to be transported by waka and boats up and down the coast and further afield at this time, facilitated by a developing network of jetties and wharves. Many of the coastal locations favoured by Maori were also favoured by the settlers and European development over lay Maori use. At the same time as the settlers were developing their landholdings many extractive industries were also established in the district with flax, timber, coal, rock, gold and minerals all exported from the area by coastal shipping. By the 1960's some farming areas and natural resources had become exhausted or unprofitable, and many historic coastal settlements declined or were abandoned.

Today, in many locations around the Tasman coast there is little evidence of the previous use and occupation with land being subsequently developed or reverting back to bush. It is expected that many of the proposed mooring areas and structures will adjoin former occupation sites and historic heritage could be associated with those locations.

### 1.5.2 Effects of Moorings and structure removal on Historic Heritage

All 12 mooring areas have a long history of moorings within them and to a greater or lesser extent still used for this purpose. Swing moorings are the preferred method of mooring in these locations that involves an anchor block (weight) with a chain raiser and a float. The anchor block over time tends to burrow into the seabed and is often completely buried. As a moored boat moves about with wind and tidal influences the chain is dragged over the seabed in an arch around the anchor block.<sup>5 6 7</sup>The anchor block and the chain cause seabed disturbance.



*Photo 1: Aerial photograph of mooring in Callala Bay, Australia showing impact zones around traditional swing moorings*

*Source: Demers, M. A., Davis, A. R. & Knott, N. A. 2013.*

3 Pa and Kainga, taken from The Prow website on the 14/09/15: <http://www.theprow.org.nz/maori/pa-and-kainga/#.VfZlomfovL8>

4 Mitchell, H & J (2007) Te Tau Ihu o Te Waka – a History of Nelson and Marlborough, Volume 2: Te Ara Hou. Hui Publishers, Wellington, New Zealand . Pg 20

5 Davidson, R.J. 2015. Biological report in relation to proposed mooring areas located between Waimea Inlet and Whanganui Inlet: biological features, habitats and issues. Prepared by Davidson Environmental Ltd. for Tasman District Council. Survey and monitoring report no. 806. 44p.

6 Morrissey D, Cameron M, Newcombe E 2018. Effects of moorings on different types of marine habitat. Marlborough District Council. Cawthron Report No. 3098.

7 Grange, K & Watts, A. 2015. Seabed survey of mooring areas, Mapua Inlet. Tasman District Council. Niwa Client Report NEL20015-010

In addition, boats moored in tidal estuaries settle on the seabed for part of the tidal cycle. Some boats have minimal contact with the seabed, resting on fins, other boats have greater contact with the entire keel resting on the seabed.<sup>8 9</sup>



*Photo 2: Marahau 2014*

In both cases there is potential for boats to cause seabed disturbances and to damage any heritage values contained within. There are other types of mooring systems which have less of an impact on the seabed however, there is no mooring system which entirely avoids seabed disturbance. The proposed plan change provides for a broader range of mooring systems to be used and particularly encourages use of low disturbance systems, when required. An in depth analysis of the impact of moorings on the seabed can be found in Davidson (2015) and Morrissey et al (2018). See the references below.

When a mooring block or coastal structure is removed, it can also cause seabed disturbance which may damage artefacts through direct impact or through smothering and or exposure.

The introduction of new moorings and the removal of structures has the potential to directly affect historic heritage within a site. In addition, where an area has significant historical importance then insensitive and inappropriate development and uses can degrade the experiential and associative heritage values of the site.

---

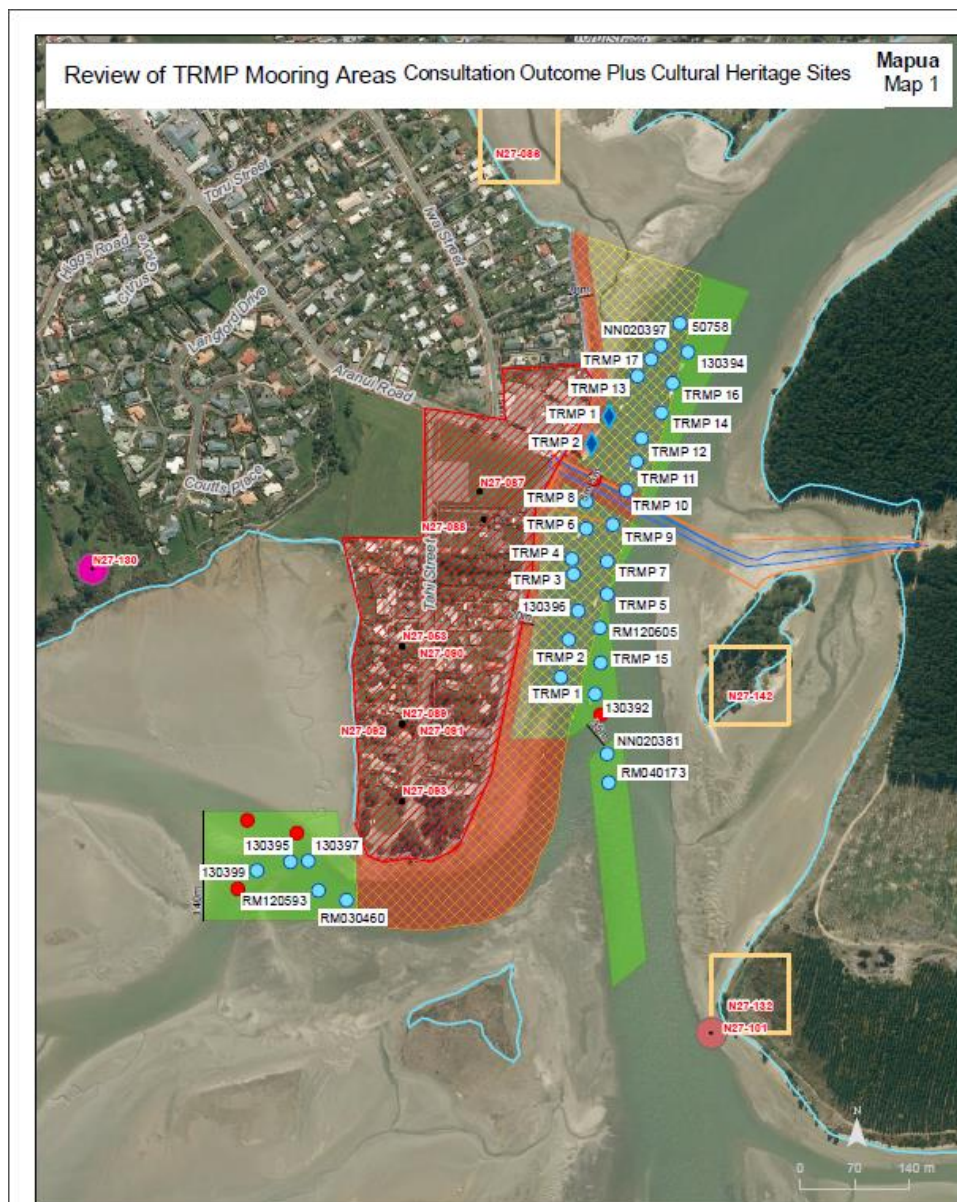
<sup>8</sup> Davidson, R.J. 2015. Biological report in relation to proposed mooring areas located between Waimea Inlet and Whanganui Inlet: biological features, habitats and issues. Prepared by Davidson Environmental Ltd. for Tasman District Council. Survey and monitoring report no. 806. 44p.  
<sup>9</sup> Morrissey D, Cameron M, Newcombe E 2018. Effects of moorings on different types of marine habitat. Marlborough District Council. Cawthron Report No. 3098. 41 p. plus appendix.

## 2. Assessment of Effects of the Proposed Mooring Areas on Heritage Values

### 2.1 Mooring Area 1 – Mapua

#### 2.1.1 Archaeological Sites

The proposed mooring area adjoins the Mapua Archaeological Precinct which incorporates the Mapua Peninsula, Grossi Point and extends around the wharf area. The precinct includes a complex of recorded archaeological sites and features, including middens, ovens, garden soils, artefacts and human burials. A considerable Maori population would have been associated with the Mapua Precinct over many years, however there is no recorded history for the site<sup>10</sup>. Grigg (2007) suggests that the archaeological values of the precinct would have been compromised by the amount of development, ground disturbance and erosion over the years<sup>11</sup>.



<sup>10</sup> Mitchell, J and Mitchell, H. (2008) Cultural Significance of Maori Archaeological Sites and Waahi Tapu in the Tasman District. (Tasman District Council and Tiakina te Taiao) p 71

<sup>11</sup> Grigg, K (2007) Heritage Assessment of Archaeological Sites: Appendix 1. Report for Tasman District and NZHPTp: 41



## 2.1.2 Settler History

The Mapua wharf area was originally developed at the beginning of the 20<sup>th</sup> century and was upgraded several times to provide for the growing export of fruit from the surrounding area. The Mapua wharf and township was vitally important for the District in the first part of the 19<sup>th</sup> century, however following a shift to use other ports and road transport the Mapua wharf declined in importance. In 1987 there were plans to pull the wharf down, but intervention from the community ensured the retention of the structure. The historic Mapua wharf area is currently a thriving tourist centre with many original wharf buildings re-used for retail purposes<sup>12</sup>. The boats moored adjoining the wharf are considered iconic and an important back drop to the historic wharf area. There is community acceptance and support for the existing moorings, which have been there for many decades.

## 2.1.3 Impact on the Heritage Values

It is considered that the continued provision for and expansion of the mooring area adjoining the Mapua wharf is consistent with the historic values of the area. Heritage New Zealand also has no concerns regarding the effects of the proposed mooring area on heritage values.<sup>13</sup>

**Recommendation:** No specific requirements for the plan change.

## 2.2 Mooring Area 2: Motueka 1

### 2.2.1 Archaeological Sites

The proposed mooring area does not adjoin any recorded archaeological sites. Mitchell & Mitchell identify the Riwaka-Motueka district as an important centre for Maori activity over many centuries, but does not specifically identify any sites in or adjoining the proposed mooring areas.<sup>14</sup>

### 2.2.2 Settler History

The proposed mooring area adjoins an historic wharf area. Motueka's current wharf is the third wharf for the area and was opened in 1916. Shipping arrived and departed according to tides and included passenger services to about 1930. Passengers travelled to Collingwood and Nelson, and on direct sailings to Wellington and other ports. The wharf attracted several industries including a large co-operatively owned cool storage.<sup>15</sup>

The main wharf is now owned and used by the Talley's Group and the wharf area has grown to include three separate marinas, two boat ramps and two slipways, which are owned and operated by local Clubs and associations<sup>16</sup>. The area has become a marine hub for the District and there are proposals to further develop the area for marine purposes.

### 2.2.3 Impact on the Heritage Values

The proposed mooring area has been used historically for moorings and it is considered consistent with historic and current use. Heritage New Zealand have no concerns regarding the effects of the proposed mooring area on heritage values.

**Recommendation:** No specific requirements for the plan change

---

<sup>12</sup> Mapua's changing tides. Retrieved 21/8/15 from: <http://www.theprow.org.nz/yourstory/mapua-changing-tides/#.VdaS5GfovL8>

<sup>13</sup> Heritage New Zealand. Personal communication 5/11/14

<sup>14</sup> Mitchell, J and Mitchell, H. (2008) Cultural Significance of Maori Archaeological Sites and Waahi Tapu in the Tasman District. (Tasman District Council and Tiakina te Taiao) pp 68

<sup>15</sup> Motueka Place Names [http://nzetc.victoria.ac.nz/tm/scholarly/tei-NHSJ02\\_06-t1-body1-d4.html](http://nzetc.victoria.ac.nz/tm/scholarly/tei-NHSJ02_06-t1-body1-d4.html)

<sup>16</sup> Port Motueka. Retrieved on 21/8/15 from <http://www.tasman.govt.nz/transport/ports-and-wharves-in-tasman/port-motueka/>

## 2.3 Mooring Area: Motueka 2

### 2.3.1 Archaeological Sites

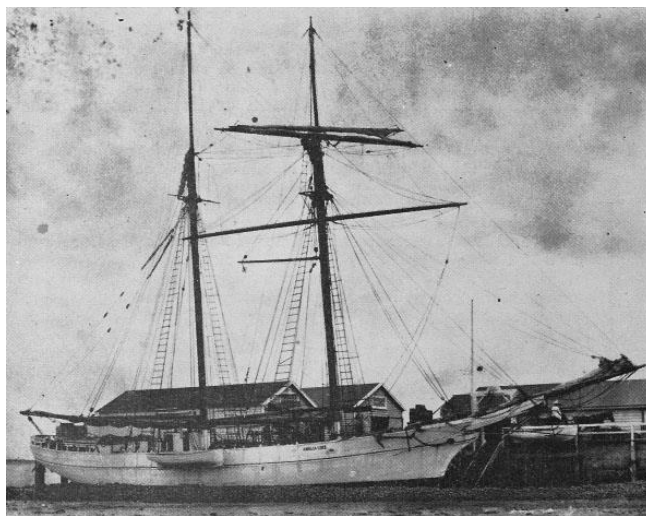
The proposed mooring area does not adjoin any recorded archaeological site.<sup>17</sup> Mitchell & Mitchell identify the Riwaka-Motueka district as an important centre for Maori activity over many centuries, but does not specifically identify any sites in or adjoining the proposed mooring areas.<sup>18</sup>

### 2.3.2 Settler History

Motueka and the surrounding districts are extremely important and in the early years of settlement Motueka contained a large population of Maori with a considerable area of land under cultivation. From the 1830's produce from the area was traded to whalers and traders and following colonisation of the Nelson settlement large quantities of potatoes, other vegetables and pork were supplied to the settlers. In 1842 Motueka was subdivided and Motueka Maori were allocated reserves adjoining the proposed mooring area, and those reserves were largely leased out.<sup>19</sup> A number of pa and Kainga sites were located in the district but none appear to be close to the proposed mooring area.

From the 1840's onwards European settlers slowly moved to Motueka. Subsistence farming and gold were the mainstays of Motueka's early economy, and it wasn't until the early 20<sup>th</sup> century that hops, tobacco and apples helped the economy to grow.<sup>20</sup>

The first wharf was constructed near the eastern end of Staples Street where it joined a sheltered inlet from the sea and was in common use from 1843.<sup>21</sup> A second wharf was built in the 1880's and was of stone construction. The wharf continued in use until 1916–1917 when all operations were transferred to the third and current wharf.<sup>22</sup>



*Photo 3: Second Motueka Wharf 1903<sup>17</sup>*

The second wharf is approximately 700m from the proposed mooring area and has a category 2 classification with Heritage New Zealand. The wharf is considered nationally rare among other wharf structures because of its stone construction and as a remnant of coastal shipping, which was a representative feature of New Zealand's early transport and economic history.<sup>23</sup>

Following the construction of the current Motueka wharf the shoreline and adjoining area changed from an industrial area to a residential and recreational area. Around 1938 the concrete Motueka Saltwater Baths were built on the foreshore in order to provide a safe place for residents to swim. The

<sup>17</sup> Heritage Assessment of Archaeological Sites, Tasman District 2007 Grig A1: 41

<sup>18</sup> Mitchell, J. and Mitchell, H. (2008) Cultural Significance of Maori Archaeological Sites and Waahi Tapu in the Tasman District. (Tasman District Council and Tiakina te Taiao) pp 68

<sup>19</sup> Mitchell, H. & J. (2004). *Te tau ihu o te waka: A history of Maori of Nelson and Marlborough. Volume 1: Te Tangata me Te Whenua – the People and the Land*. Wellington, N.Z.: Huia. p. 305

<sup>20</sup> Motueka and early settlement. Retrieved 21/8/15 from: <http://www.theprow.org.nz/places/motueka-early-settlement/#.VhwTsmfovL8>

<sup>21</sup> Motueka's First Harbour Retrieved 21/8/15 from: <http://www.theprow.org.nz/places/motueka-first-harbour/#.VhwtsGfovL8>

<sup>22</sup> Motueka Place Names [http://nzetc.victoria.ac.nz/tm/scholarly/tei-NHSJ02\\_06-t1-body1-d4.html](http://nzetc.victoria.ac.nz/tm/scholarly/tei-NHSJ02_06-t1-body1-d4.html)

<sup>23</sup> Motueka Wharf (Former) and Memorial. Retrieved 21/8/15 from <http://www.heritage.org.nz/the-list/details/2985>

Motueka baths are located about 200m from the proposed mooring area and are one of four such remaining baths in New Zealand. The baths have a category 2 classification with Heritage New Zealand.<sup>24</sup>

### 2.3.3 Impact on Heritage Values

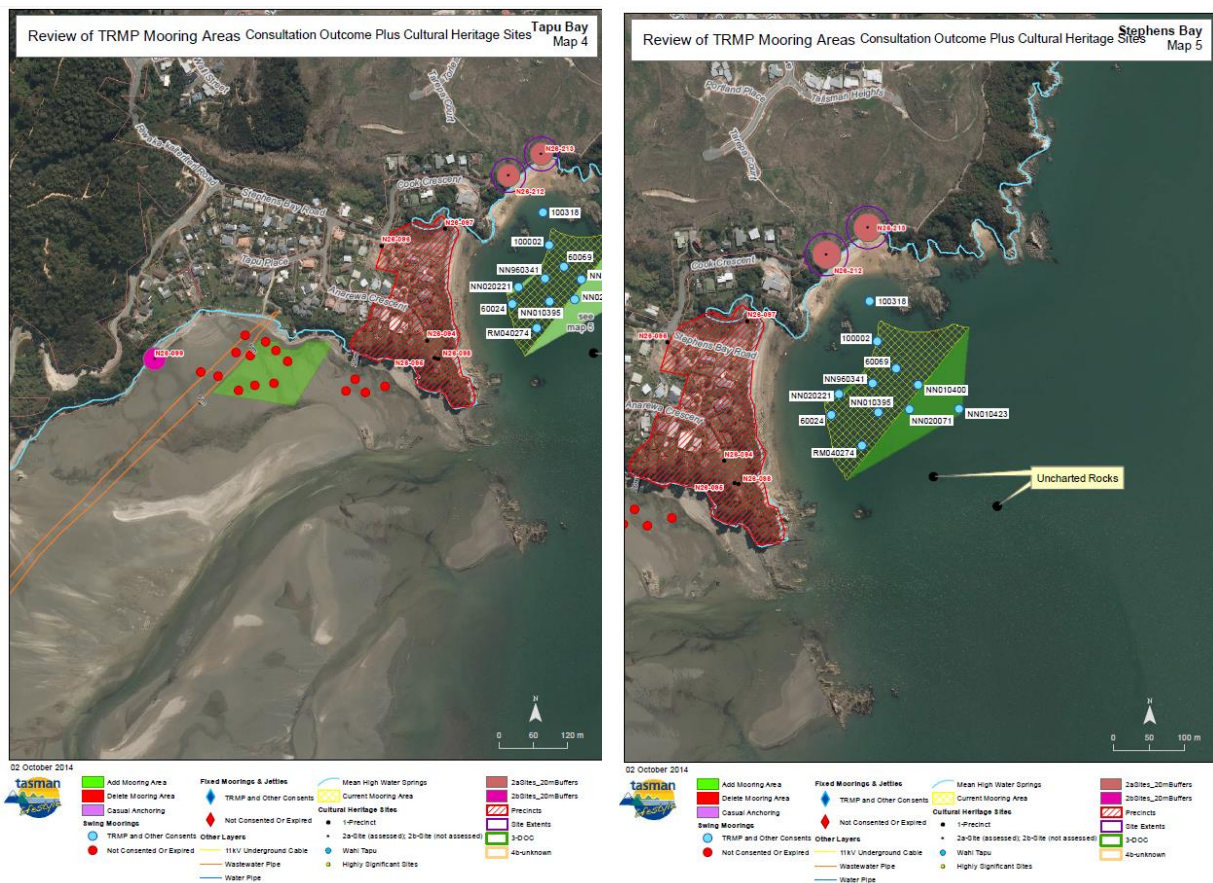
The proposed mooring area is in an area with established long term use for moorings. Two Category 2 classified heritage items are in the vicinity of the proposed mooring area. The moorings will have no physical effect on either the wharf or the salt water baths as they are some distance away. Moorings and boats are considered to be sympathetic uses to the maritime transport heritage of the wharf and recreational use of the salt water baths. Overall, it is considered that the proposed mooring areas will not affect the historic heritage in the vicinity. Heritage New Zealand also have no concerns regarding the effects of the proposed mooring area on heritage values<sup>25</sup>.

**Recommendation:** No specific requirements for the plan change

## 2.4 Mooring Areas: Tapu Bay and Stephens Bay

### 2.4.1 Archaeological Sites

The proposed mooring areas adjoins the Stephens Bay Archaeological Precinct which comprises the reserve at the end of Awawera Crescent, between Stephens Bay and Tapu Bay, and some residential sections. Recorded sites in the precinct include Anawakau Pa and associated features, terraces, pits, middens and possible gardening soils. Anawakau Pa comprises a large promontory pa, with a defensive ditch cutting off the promontory.<sup>26</sup>



<sup>24</sup> Motueka Saltwater Baths. Retrieved 21/8/15 from <http://www.heritage.org.nz/the-list/details/7617>

<sup>25</sup> Heritage New Zealand. Personal communication 5/11/14

<sup>26</sup> Heritage Assessment of Archaeological Sites, Tasman District 2007 ? Grig A1: 41

Kaiteriteri lies at the centre of what was for several generations a large and intensive occupation and cultivation complex. This complex occupied a 10km stretch of coastline. It included up to eight pā, as well as associated kainga, urupā, cultivations, mahinga kai areas and fishing stations.<sup>27</sup>

### 2.4.2 Settler History

For several months each summer, between 1848 and 1853, the Stephens lived at a beach camp at Stephens Bay and it is assumed the Bay was named after these residents<sup>28</sup>. No information on the settler history of Tapu Bay was found.



*Photo 4: Camp near Kaiteriteri (summer home of the Stephens family 1848-53)*  
Source :Greenwood, S, The Nelson Provincial Museum

### 2.4.3 Impact on Heritage Values

The area has been developed for residential development and moorings have been established in the area for a considerable length of time. It is not anticipated the proposed mooring areas will have any effects on the heritage values of the area. Heritage New Zealand also have no concerns regarding the effects of the proposed mooring area on heritage values<sup>29</sup>.

**Recommendation:** No specific requirements for the plan change

## 2.5 Mooring Area: Kaiteriteri

### 2.5.1 Archaeological Sites

The proposed mooring areas adjoins the Kaiteriteri Archaeological Precinct. The precinct is located at Kaiteriteri Beach, and incorporates land between beach and inlet, and headland to north. Recorded sites include the pa on the headland and extensive areas of middens and ovens along the beach below.<sup>30</sup> Kaiteriteri appears to have been an undefended kainga area with Kaka Pa occupied only when a defended pa site was needed. Kaka Point is recorded as one of several defensive Pa that lined the coast between the Riwaka River and Marahau overlooking the Nelson and Golden Bays.<sup>31 32</sup>

<sup>27</sup> New Zealand Government (2014) Te Tau Ihu Statutory Acknowledgments. Pg 10

<sup>28</sup> Samuel Stephens (1803-1855) Retrieved 21/8/15 from <http://www.theprow.org.nz/people/samuel-stephens/#.Vhw8mmfovL8>

<sup>29</sup> Heritage New Zealand. Personal communication 5/11/14

<sup>30</sup> Arczoo Ltd (2007) Heritage Assessment of Archaeological Sites, Tasman District. A1: pp 36-38

<sup>31</sup> Arczoo Ltd (2007) Heritage Assessment of Archaeological Sites, Tasman District. A1: pp 36-38

<sup>32</sup> Kaiteriteri Recreation Reserve Board (2015) Revised Draft Kaiteriteri Recreation Reserve and Kaka Point Historic Reserve Management Plan. Kaiteriteri Recreation Reserve Board. Pg 11



Sites in the precinct have been substantially modified. The pa site was bulldozed in the 1970s for the formation of the road and car park, resulting in the loss of the most visible features. The beach frontage has been repeatedly excavated for public works and in 1968 an extensive beach reconstruction took place.<sup>33</sup> However, intact archaeological material is thought to remain.<sup>34</sup> Mitchell and Mitchell also note that Kaiteriteri was extensively used by Maori and is an important site for the information it may hold beneath the surface.<sup>35</sup>

Kaka Pa was thought to be either unoccupied at time of European settlement or abandoned soon after.

## 2.5.2 Settler History

Captain Arthur Wakefield is the first European recorded as visiting Kaiteriteri in 1841 and a surveyors base camp was established there soon after. A korero was held in the Bay with local chiefs to discuss Nelson land purchases and an agreement was reached on payment and land reserves. Kaiteriteri is of historic significance as the first meeting place between tangata whenua and representatives of the New Zealand Company.<sup>36</sup>

The New Zealand Companies camp site area was later sold to G Daniels. S Rowling acquired the land in 1914-16 and established an orchard and later grew pines and eucalypts in the sandy soil. From the 1920's onwards there was camping at the beach, but access was difficult.<sup>37</sup> In 1936 the first of many parcels of land were gazetted for recreational use and Kaiteriteri Reserve grew to be one of New Zealand's largest camping grounds.<sup>38</sup> The area proposed for moorings, in association with the camping ground, has been used for moorings for a long time. Until recently, all moorings in the Bay were owned by the Kaiteriteri Reserve Board and the Board currently holds resource consent for the

<sup>33</sup>History of Kaiteriteri Beach. Retrieved 5/11/15 from <http://www.motuekaonline.org.nz/history/stories/030310h1.html>

<sup>34</sup> Arczoo Ltd (2007) Heritage Assessment of Archaeological Sites, Tasman District. A1: pp 36-38

<sup>35</sup>Mitchell, J and Mitchell, H. (2008) Cultural Significance of Maori Archaeological Sites and Waahi Tapu in the Tasman District. (Tasman District Council and Tiakina te Taiao) p 59, 62

<sup>36</sup> Kaiteriteri Recreation Reserve Board (2015) Revised Draft Kaiteriteri Recreation Reserve and Kaka Point Historic Reserve Management Plan. Kaiteriteri Recreation Reserve Board. Pg 13

<sup>37</sup> History of Kaiteriteri Beach. Retrieved 5/11/15 from <http://www.motuekaonline.org.nz/history/stories/030310h1.html>

<sup>38</sup> Kaiteriteri Recreation Reserve Board (2015) Revised Draft Kaiteriteri Recreation Reserve and Kaka Point Historic Reserve Management Plan. Kaiteriteri Recreation Reserve Board. Pg 13

inner seasonal moorings, swim platform mooring and two permanent moorings, including the launch wardens mooring.

### 2.5.3 Iwi

Kaka Point is a wāhi tapu (occupation site and burial ground) and through the Te Tau Ihu Claims Settlement Act 2013 Kaka Point was vested jointly in the trustees of the Ngāti Rārua Settlement Trust, the trustees of the Ngāti Tama ki Te Waipounamu Trust and the trustees of the Te Ātiawa o Te Waka-a-Māui Trust. The land was then gifted back to the Crown and reclassified under the Reserves Act 1977 as a Historic Reserve, and formally renamed as Kaka Point Historic Reserve.<sup>39</sup> Kaka Island, which adjoins Kaka Pa Point, is a urupa and is in Maori ownership.

It is proposed to manage Kaka Point Historic Reserve as follows.

- Provide for low risk family orientated outdoor recreation while creating an awareness of the Settlement values for visitors.
- To return the natural values on the site.
- Activities will enhance awareness of the cultural values of the site.

The proposed mooring area which adjoins the historic reserve is not considered to conflict with these goals.

Ngatu Rarua, Te Ātiawa o Te Waka-a-Māui tūpuna, Ngati Tama Ki Te Tau Ihu and Ngāti Apa all specifically mention Kaiteriteri as being important in the Statutory Acknowledgement.<sup>40 41 42 43</sup>

### 2.5.4 Impact on Heritage Values

The mooring area is not considered contrary to the purpose of the adjoining Kaka Point Historic Reserve. Heritage New Zealand have no concerns regarding the effects of the proposed mooring area on heritage values<sup>44</sup>. Moorings have been established in Kaiteriteri for a considerable length of time and overall it is not anticipated the mooring areas will have any effects on the heritage values of the area.

**Recommendation:** No specific requirements for the plan change

## 2.6 Mooring Area: Otuwhero – Marahau

### 2.6.1 Archaeological Sites

The proposed mooring area is in the vicinity of the Marahau Archaeological Precinct. The precinct comprises part of the modern day settlement of Marahau and extends from the southern end of the beach to the tip of the sandspit and back to the base of the hills. A wide range of sites are recorded there, including garden soils, middens, ovens, artefacts and artefact manufacturing evidence representing a variety of past human activities.<sup>45</sup> Mitchell and Mitchell also notes that the Inlet was “well occupied and well used in early colonial times and probably for centuries before that” and that there is still intact material which could provide significant information about the past.<sup>46</sup> Mitchell and Mitchell also suggest that it “would probably be fruitful to consider the Marahau Precinct in the context of the wider landscape, especially the Marahau Valley sites and the extensive complex of pits and terraces in the Otuwhero Valley and the cluster inland from Moss Road.”<sup>47</sup>

<sup>39</sup> Kaiteriteri Recreation Reserve Board (2015) Revised Draft Kaiteriteri Recreation Reserve and Kaka Point Historic Reserve Management Plan. Kaiteriteri Recreation Reserve Board. Pg 11

<sup>40</sup> New Zealand Government (2014) Te Tau Ihu Statutory Acknowledgments. Pg 83

<sup>41</sup> New Zealand Government (2014) Te Tau Ihu Statutory Acknowledgments. Pg 111

<sup>42</sup> New Zealand Government (2014) Te Tau Ihu Statutory Acknowledgments. Pg 97

<sup>43</sup> New Zealand Government (2014) Te Tau Ihu Statutory Acknowledgments. Pg 102

<sup>44</sup> Heritage New Zealand. Personal communication 5/11/14

<sup>45</sup> Heritage Assessment of Archaeological Sites, Tasman District Arczoo Ltd. A1: 33-34

<sup>46</sup> Mitchell, J and Mitchell, H. (2008) Cultural Significance of Maori Archaeological Sites and Waahi Tapu in the Tasman District. (Tasman District Council and Tiakina te Taiao) pp 61

<sup>47</sup> Mitchell, J and Mitchell, H. (2008) Cultural Significance of Maori Archaeological Sites and Waahi Tapu in the Tasman District. (Tasman District Council and Tiakina te Taiao) pp 61

A defended pa site, consisting of a platform and terraces, is located at the top of a bluff above the sand spit. Below the Pa site and at the base of the spit several middens/ovens have been identified. There are no sites immediately adjoining the proposed mooring area.



## 2.6.2 Settler History

The area was well populated in early colonial times. In 1841 at the time of the arrival of the NZ Company Rawiri Putaputa was chief at Marahau and in the 1841 census nineteen people were recorded as residents at Marahau. Four fifty acre sections originally chosen as Tenths Reserves in 1842 and were redesignated as Occupation Reserves in 1862. Another 83 acre Occupation Reserve was set aside in 1856. The reservations recognise the importance of the area to iwi.<sup>48</sup>

Timber was cut on the mainland with 300 acres of bush land at Marahau taken in 1863. A saw pit was initially used and then various waterwheels used to drive the machinery.

## 2.6.3 Impact on Heritage Values

The proposed mooring area is some distance from the precinct and it is thought that any seabed disturbance arising from the moorings would not affect the precinct or any other heritage values in the area. Heritage New Zealand have no concerns regarding the effects of the proposed mooring area on heritage values.<sup>49</sup>

**Recommendation:** No specific requirements for the plan change

<sup>48</sup> Mitchell, J. and Mitchell, H. (2008) Cultural Significance of Maori Archaeological Sites and Waahi Tapu in the Tasman District. (Tasman District Council and Tiakina te Taiao) pp58-60

<sup>49</sup> Heritage New Zealand. Personal communication 5/11/14





## 2.7.2 Settler History

A quarry reserve was set aside at Torrent Bay in the 1870's at Anchorage with the granite blocks loaded from Jetty Point (Pitt head). Sand was also taken from the beach at Anchorage and transported to Wellington.<sup>56</sup> A tramline was established in Torrent Bay bring posts and firewood from further up the valley<sup>57</sup>. Boat building also occurred in the Bay with several vessels built there.<sup>58 59</sup> Over the years several coastal traders were wrecked in the vicinity of Torrent Bay.

Plans of the area drawn in the 1880's show large "camps" on both sides of the lagoon, and a house and boat shed on one of the boat builders land.

By the 1890's Torrent Bay was largely empty of settlers and from the 1900's holiday homes were established in the Bay and the Bay gained the reputation as a pleasant holiday location.<sup>60</sup>



Photo 6: 1915 Glasgow Bay<sup>61</sup>

## 2.7.3 Impact on Heritage Values

The proposed mooring areas are some distance from the archaeological sites and it is thought that any seabed disturbance arising from the moorings would not affect the sites. The area has long maritime, recreational use and the continued use of the area for moorings is not thought to affect heritage values. Heritage New Zealand have no concerns regarding the effects of the proposed mooring area on heritage values.<sup>62</sup>

**Recommendation:** No specific requirements for the plan change

<sup>56</sup> Smith, D ( 1997) Abel Tasman Area History. Occasional Publication no. 33, Department of Conservation, pg 19.

<sup>57</sup> Smith, D ( 1997) Abel Tasman Area History. Occasional Publication no. 33, Department of Conservation, pg 23

<sup>58</sup> Smith, D ( 1997) Abel Tasman Area History. Occasional Publication no. 33, Department of Conservation, pg 25

<sup>59</sup> Denis, A (1985) A Park for all Seasons –The Story of Abel Tasman National Park. Abel Tasman national park, New Zealand pg 94

<sup>60</sup> Nelson Historical Society (1976) Nelson Historical Society Journal, Volume 3, Issue 2, August 1976 , Nelson Historical Society (Inc.), August 1976, Nelson. Pg 17

<sup>61</sup> Denis, A (1985) A Park for all Seasons –The Story of Abel Tasman National Park. Abel Tasman national park, New Zealand pg 94

<sup>62</sup>Heritage New Zealand. Personal communication 5/11/14

## 2.8 Mooring Area: Milnthorpe

### 2.8.1 Archaeological Sites

Parapara was strategically located on land and sea routes between Whakatu, Motueka and Takaka in Te Tau Ihu and the pounamu resources of Te Tai Poutini. Parapara Inlet was also an extremely valuable resource area; the outer coast, estuary, streams, swamps and forests teemed with life making it rich with mahinga kai. Highly prized dyestuffs were obtained from the muds and iron-rich haematic clays were quarried from nearby. Kaiwhakaruaki (taniwha) inhabited and died in the Parapara Inlet.<sup>63</sup>

The Parapara Inlet Archaeological Precinct includes the land on both sides of the inlet entrance. Sites recorded in the precinct are predominantly large shell middens and oven areas. Artefacts have also been recovered from the precinct. The precinct comprises one of the major foci of economic activity in western Golden Bay<sup>64</sup>.



An extensive midden (80x80m) has been identified adjoining the proposed mooring area, consisting of soil mixed with broken pipi and cockle shell. The site has been extensively modified by roading and the construction of the wharf. In recent years trees have been planted on the site<sup>65</sup>. There is the potential for seabed disturbance of the midden by mooring blocks and boats settling on the seabed. However, the area has been used for moorings and as a wharf for decades and the probability of material still remaining in the seabed is not thought to be high.

<sup>63</sup> Mitchell, H. & J. (2004). *Te tau ihu o te waka: A history of Maori of Nelson and Marlborough. Volume 1 : Te Tangata me Te Whenua – the People and the Land*. Wellington, N.Z. : Huia. p. 27-28

<sup>64</sup> Arczoo Ltd (2007) Heritage Assessment of Archaeological Sites, Tasman District. A1: 11

<sup>65</sup> NZAA Site Number M25/17 Retrieved 18/11/15 from <https://nzaa.eaglelegis.co.nz/NZAA/Site/?id=M25/17>

## 2.8.2 Settler History

Mitchell & Mitchell<sup>66</sup> identify Parapara as the first major settlement in colonial times which was well known for its natural resources. At least one Pa existed during early colonial years. Parapara was the scene of gold, iron and silver mining. There was also an iron ore paint factory in operation at Parapara from the 1880's until the early 1900's. The current wharf dates to around the 1980's replacing in whole or part a previous wharf.



*Photo 7: Parapara Gold Sluicing Company workers*

Source:[http://natlib.govt.nz/records/23037274?search%5Bi%5D%5Bname\\_authority\\_id%5D=484210&search%5Bpath%5D=items](http://natlib.govt.nz/records/23037274?search%5Bi%5D%5Bname_authority_id%5D=484210&search%5Bpath%5D=items)

## 2.8.3 Impact on Heritage Values

There are few moorings in the proposed mooring area and the area has been used by recreational and commercial boats for many decades, it is anticipated that through use and development of the adjoining wharf what little archaeological evidence that may exist on the seabed will have long since been lost. Landward, it was noted in 1981 that the construction of the road and development of the wharf had extensively modified the midden site. Since then further development has continued to modify the site. Any new moorings established within the mooring area are likely to be some distance seaward from the midden site. The continued use of the area adjoining the wharf, for mooring is thought to be consistent with the heritage of the area. Heritage New Zealand have no concerns regarding the effects of the proposed mooring area on heritage values.

**Recommendation:** No specific requirements for the plan change

---

<sup>66</sup> Mitchell, J and Mitchell, H. (2008) Cultural Significance of Maori Archaeological Sites and Waahi Tapu in the Tasman District. (Tasman District Council and Tiakina te Taiao) pp 35-6, 41-43

## 2.9 Mooring Area: Mangarakau Wharf

### 2.9.1 Archaeological Sites

There are no recorded archaeological sites in the immediate vicinity of the proposed mooring area. Mitchell & Mitchell note that the area was significant to Maori and the archaeological records for the area do not reflect the well-used area. While Mitchell & Mitchell suggesting a number of potential archaeological sites in the area they do not specifically identify sites in the vicinity of the proposed mooring area.<sup>67</sup>

### 2.9.2 Settler History

Maori discovered gold in 1862, prompting an influx of eager prospectors to the Anatori River catchment. In 1866 the West Whanganui Coal Company began mining, and coal was shipped out from the inlet. From 1900 onwards the goldminers were joined by an influx of people who came to work in the timber industry, farming, flax milling, road making and associated services. A flourishing community established at Mangarakau.<sup>68</sup> The current concrete wharf was a government project from the 1950s when it was thought that there might be a need for a substantial structure for export of timber and coal but was never completed or decked. Alongside the wharf is a small reclamation which contains the scow Kohi. The Kohi (built in 1911) was towed to the site and beached sometime after her sinking in 1962.<sup>69</sup>



*Photo 8: Whanganui Inlet*

Source: <http://natlib.govt.nz/records/22706411?search%5Bi%5D%5Bsubject%5D=Whanganui+Inlet&search%5Bpath%5D=items>

### 2.9.3 Impact on Heritage Values

The proposed mooring area is not located near an identified archaeological site, although it is acknowledged that such a site could exist. The proposed mooring area is not thought to affect the heritage values in the area. Heritage New Zealand have no concerns regarding the effects of the proposed mooring area on heritage values.

**Recommendation:** No specific requirements for the plan change

<sup>67</sup> Mitchell, J and Mitchell, H. (2008) Cultural Significance of Maori Archaeological Sites and Waahi Tapu in the Tasman District. (Tasman District Council and Tiakina te Taiao) pp22-24

<sup>68</sup>History. Retrieved 21/11/15 from: <http://www.gbworkcentre.org.nz/mangarakauswamp/history.html>

<sup>69</sup> Sprosen, A ( 1982) The Scows of Port Nelson. Journal of the Nelson and Marlborough Historical Societies, Volume 1, Issue 2, November 1982. Nelson Historical Society (Inc.), Nelson

### 3. Assessment of Effects of the Proposed Policies, Objectives and Rules on Heritage Values

The Tasman coast is littered with coastal structures both lawful and unlawful, in use and long since abandoned. Under the current plan provisions there is no rule providing for the removal of coastal structures and subsequently any person wishing to remove a coastal structure is required to get resource consent. The plan change proposes to make the activity of removing a structure permitted subject to conditions. The changes proposed are as follows.

New Policies - the proposed plan change introduces, amends or updates policies which “Require the removal or remove unauthorised, abandoned, obsolete or redundant structures adversely affecting [natural character/marine habitat or ecosystems/natural character or landscape/ public access] except where the removal would have adverse effects on the environment or where the structure is listed under the Heritage New Zealand Pouhere Taonga Act 2014”.

To support these policies a new rule (as follows) has been included to provide for the removal of some structures as a permitted activity.

New rule (25.1.5.7) permits any disturbance or occupation of the coastal marine area for the purpose of maintaining, repairing, replacing or reconstructing of any structure or work subject to a number of conditions, including limitations on seabed disturbance and who can remove the structure.

A further condition of consent requires:

“25.1.5.7 (f) The structure is not recorded on the New Zealand Heritage List (in accordance with the Heritage New Zealand Pouhere Taonga Act 2014)”.

This permitted rule applies to all structures in the coastal marine area with the exception of items listed on the New Zealand Heritage List. Where it is proposed to maintain, repair, replace or reconstruct a listed structure, the activity becomes a Discretionary Activity (25.1.5.8). If the historic heritage is also an archaeological site then an authority to modify or destroy is still required from Heritage New Zealand under the Heritage New Zealand Pouhere Taonga Act 2014.

The Plan identifies that “few items of historical heritage values exist in the coastal marine area, and that without some economic use these are likely to continue to deteriorate because of the nature of the marine environment”<sup>70</sup>. There are three historic heritage items listed in the Plan for the coastal marine area, the Onekaka Wharf and Tramline, Mapua wharf building and Moteuka Wharf (former). The Motueka Saltwater Baths is also on the New Zealand Heritage List, but have not been included in the Plan. The heritage provisions in the Plan are due for review in 2021 and at that point in time it is probable that additional items/sites of historical heritage will be identified within the coastal marine area, and included in the Plan. The review of the Tasman Regional Policy Statement (TRPS) has commenced and it is anticipated that the provisions in the objectives and policies for historic heritage will also be changed.

The Plan contains one general objective and three policies for historic heritage. The objective is as follows:

“21.5.2. Objective – Maintenance of the cultural heritage values of items, sites or areas in the coastal marine area, including taonga of the tangata whenua.”

Two of the policies are site specific (Pariwhakaoho) and not relevant to the new rule, the third policy is as follows:

“21.5.3.3 Policy – To ensure that no historical heritage item in the coastal marine area is a danger to navigation.”

---

<sup>70</sup> Chapter 21.0 of the Tasman Resource Management Plan (pg 21/3)

The TRPS contains a broad objective for the protection and enhancement of significant heritage and cultural values, with policies seeking to protect or avoid, remedy or mitigate adverse effects.

### **3.1 Impact on Heritage Values**

The proposed changes are not contrary to the heritage policies in the Plan and to some extent provide a simpler mechanism whereby historic heritage could be removed where there was danger to navigation (Policy 21.5.3.3).

The proposed permitted activity rule excludes the removal of Heritage New Zealand listed structures, but does not prevent the removal of other historic heritage. This rule could potentially be contrary to Objective 21.5.2, if “cultural heritage values of items, sites or areas in the coastal marine area, including taonga of the tangata whenua” were not maintained. There are no items of cultural heritage values identified in the plan that are not listed structures, however, there may be other structures like historic wharfs which could fall within this category.

Where the removal of the structure does not meet the requirements of the permitted rule then discretionary consent (25.2.3) is required. There is no policy within the Plan explicitly supporting the retention of historic heritage (including listed items) within the coastal marine area. It is unknown if this is an issue, the Plan currently states that “few items exist”. This lack of guidance is an existing issue and it is beyond the scope of the draft plan change does resolve this policy short fall.

The NZCPS (2010) – Policy 17 requires Council to “protect historic heritage in the coastal environment from inappropriate subdivision, use, and development”. Policy 17(f) specifically requires that Council “includes policies, rules and other methods ... in regional plans”, the policies, rules and other methods include, among others, the (a) identification, assessment ... of historic heritage... The NZCPS (2010) was gazetted after the Plan provisions were written and the current policy framework is not written in accordance with that policy. The draft wording gives greater effect to the Policy 17 than the provisions currently in the Plan, however, it does not fully give effect to policy 17 because the assessment of only occurs for Heritage New Zealand listed items.

### **3.2 Recommendation**

That the wording of policy 25.1.5.7 (f) be broadened to require an assessment of effects on all historic heritage when structures are removed from the coastal marine area.

# Seabed survey of mooring areas, Mapua Inlet

*Prepared for Tasman District Council*

*July 2015*

Prepared by:

Ken Grange and Ashleigh Watts

For any information regarding this report please contact:

Ken Grange

Regional Manager

Corporate

+64-3-545 7730

ken.grange@niwa.co.nz

National Institute of Water & Atmospheric Research Ltd

PO Box 893



Nelson 7040

Phone +64 3 548 1715

NIWA CLIENT REPORT No: NEL20015-010

Report date: July 2015

NIWA Project: TDC15401

Quality Assurance Statement		
	Reviewed by:	Tara Anderson
	Formatting checked by:	
	Approved for release by:	Sean Handley

---

© All rights reserved. This publication may not be reproduced or copied in any form without the permission of the copyright owner(s). Such permission is only to be given in accordance with the terms of the client's contract with NIWA. This copyright extends to all forms of copying and any storage of material in any kind of information retrieval system.

Whilst NIWA has used all reasonable endeavours to ensure that the information contained in this document is accurate, NIWA does not give any express or implied warranty as to the completeness of the information contained herein, or that it will be suitable for any purpose(s) other than those specifically contemplated during the Project or agreed by NIWA and the Client.



# Contents

- Executive summary ..... 4**
- 1 Introduction ..... 5**
- 2 Methods..... 6**
  - 2.1 Side-scan sonar ..... 6
  - 2.2 Remote underwater video..... 7
  - 2.3 Dredge tows..... 8
- 3 Results ..... 10**
  - 3.1 Side-scan sonar ..... 10
  - 3.2 Underwater video ..... 12
  - 3.3 Dredge tows..... 13
- 4 Discussion ..... 15**
- 5 Acknowledgements ..... 15**
- 6 References..... 16**
- Appendix A Epifaunal species recorded from dredge tows, Mapua..... 17**

**Tables**

- Table 3-1: Characteristics of each dredge tow. 14

**Figures**

- Figure 1-1: Plan of existing mooring areas and potential changes within the Mapua Estuary. 5
- Figure 2-1: Side-scan sonar images from the Mapua mooring location. 7
- Figure 2-2: Six underwater video transect stations (R1-R6) located within the Mapua channel. 8
- Figure 2-3: Dredge tows (D1-R10) situated near existing and potential mooring sites in Mapua channel. 9
- Figure 3-1: Side-scan sonar image off Grossi Point. 10
- Figure 3-2: Side-scan sonar images depicting sea floor features. 11
- Figure 3-3: Benthic habitat in the Mapua Channel with dense beds of mussels and the occasional cushion star. 12
- Figure 3-4: Frame grabs from towed underwater video. 13

## Executive summary

As part of a review of mooring areas within the coastal area of Tasman District Council, NIWA was commissioned to undertake a benthic (sea floor) survey of the existing and potential new mooring areas within the Mapua channel at the entrance to Waimea Inlet.

A variety of methods, including side-scan sonar, towed underwater video, and dredge tows were used to characterise the habitats and major species present, and to identify any obvious effects of the existing mooring structures.

The Mapua channel is characterised by strong tidal currents, as a result little fine sediment accumulates; rather the benthic habitat is dominated by gravel, cobbles, and small boulders. These cobbles and small boulders support populations of green lip mussels, along with a variety of common estuarine species that are resilient to tidal flow and sediment disturbance, including that caused by the movement of mooring chains. Small scour marks aligned parallel to the channel were evident around some existing moorings, probably as a result of the mooring chain dragging during ebb and flow currents. The only biological impact identified from this mooring-related disturbance was, however, the absence of small patches of mussels where the chain had dragged across the boulders.

The new proposed potential mooring areas are situated in the same depths, and support similar habitats and species communities as the existing ones. Therefore any potential effects will be the same as those recorded at the present moorings.

# 1 Introduction

Tasman District Council (TDC) is undertaking a review of the marine mooring areas within the district, which may result in the replacement of existing moorings, and/or the addition or contraction of areas. One area under consideration is the Mapua channel at the entrance to Waimea Inlet, where changes to the existing mooring areas are being considered (Figure 1-1).



Figure 1-1: Plan of existing mooring areas and potential changes within the Mapua Estuary.

To help inform decisions, TDC has requested a seabed survey of the existing and proposed mooring areas, along with an assessment of the affects the existing swing moorings have on the benthic habitats. NIWA was commissioned to undertake this survey in June 2015.

Little detailed information exists on the marine habitats of the Mapua channel. The habitat map available from the TDC website (<http://www.tasman.govt.nz/environment/coastal-marine/coastal-marine-biodiversity/coastal-ecological-risk-assessment-monitoring-report/>) identifies areas of firm sand at the entrance to the inlet, grading into soft sand/mud beyond the area of Grossi Point. It also identifies small areas of cobbles on the edges of the main entrance channel. Previous ecological reports on the Waimea Estuary, (e.g. Davidson & Moffat, 1990; Gillespie et al, 2007) also do not provide detailed descriptions of the Mapua channel area.

## 2 Methods

The sea floor habitats along the Mapua channel from seaward of the wharf to Grossi Point, and south and west of Grossi Point were surveyed using a variety of sampling methods on 16 June 2015. Additional underwater video sampling was completed on 24 July 2015. Benthic habitats were assessed using three methods. The first method used a high-resolution side-scan sonar to acoustically map sea floor features surrounding existing and potential moorings. The second method used dredge sampling to collect epibenthic species and sea floor material present around these mooring areas, and the third method used a towed underwater remote camera to record video transects, providing a visual assessment of the habitats adjacent to existing and potential new swing moorings.

### 2.1 Side-scan sonar

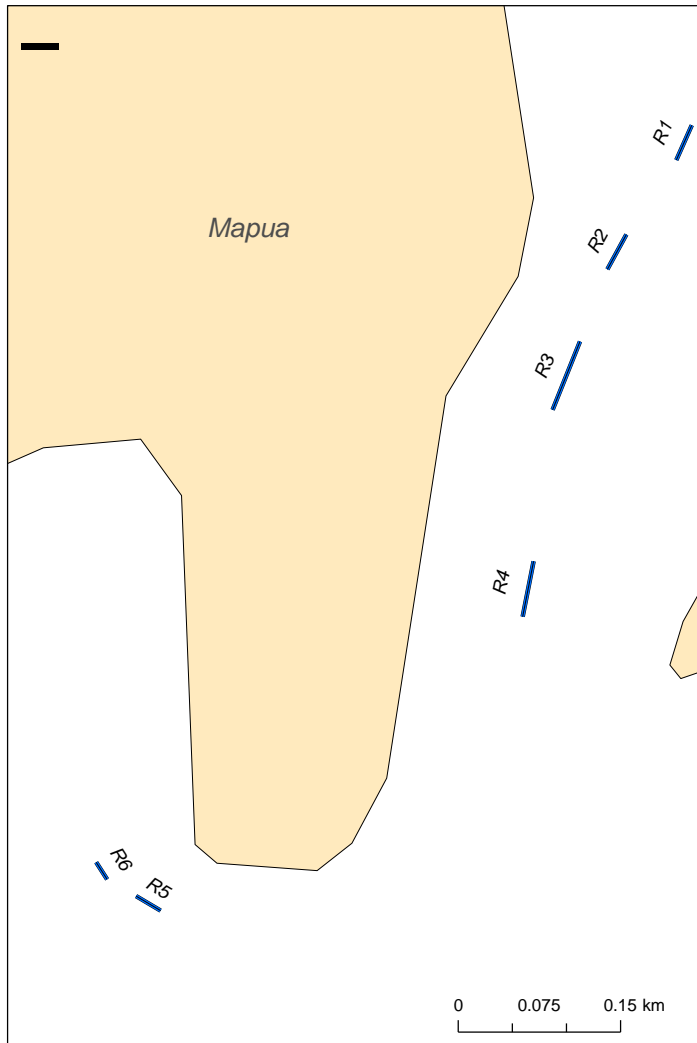
To identify sea floor features, five side-scan sonar transects, each 60 m in width (30 m either side of the vessel) and up to 800 m in length (Figure 2-1) were surveyed alongside existing and proposed mooring areas using a high-frequency (675 kHz) Triton sonar towfish. The position of the side-scan sonar was automatically recorded every 2 seconds along each transect using a hand-held GPS and saved in real time to a laptop on board the vessel using SeaNet Pro™ software. The raw files were post-processed using Triton Perspective™ software to produce geo-referenced images from the acoustic data that could be viewed in ArcMap GIS or Google Earth and allow features of interest to be mapped in relation to the existing and newly-proposed mooring sites.



**Figure 2-1: Side-scan sonar images from the Mapua mooring location.**

## 2.2 Remote underwater video

To describe the benthic habitats and potential effects of existing swing moorings, six underwater video transects were taken using both a vertically facing remote drop camera (ROV attached to a frame) or a forward facing HD GoPro attached to a sled. Video footage was attained by either lowering the ROV to the sea floor using a live video feed to the surface vessel, or towing the video sled across the sea floor alongside or as close as possible to existing moorings and potential mooring sites at slack low water to mitigate the strong tidal currents and entanglement due to the close proximity of moored vessels (Figure 2-2). The start and end of each transect was recorded by the vessel GPS.



**Figure 2-2: Six underwater video transect stations (R1-R6) located within the Mapua channel.**

### 2.3 Dredge tows

The dominant epifauna was sampled using a benthic dredge (600 x 25 mm mouth dimensions; mesh size 2.0 mm). Ten dredge tows were collected up to half an hour either side of slack water. Dredge tows were run adjacent to and near existing and potential moorings and were predominantly parallel to the shoreline. The length of the first two tows was two minutes, but tow length was then reduced to 30 seconds because the longer tows collected large volumes of rocks and mussels. Because some tows were shorter than others and the dredge contents varied in quantity, all results can only be regarded as qualitative. Data on habitat type (cobble, gravel, sand) were visually assessed and also recorded for each dredge sample.

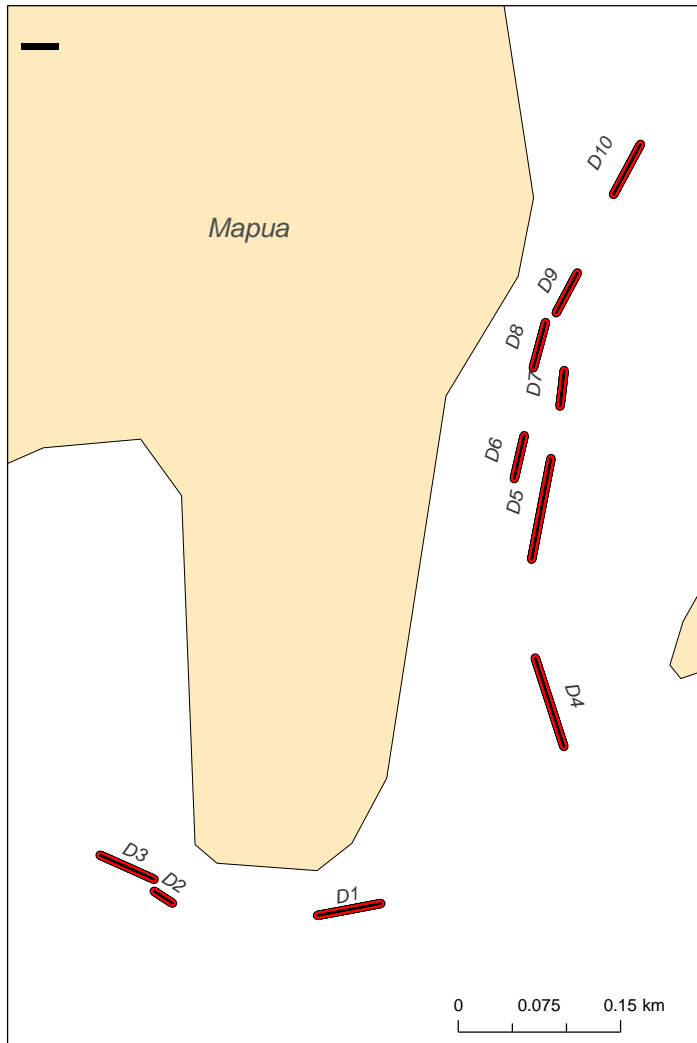
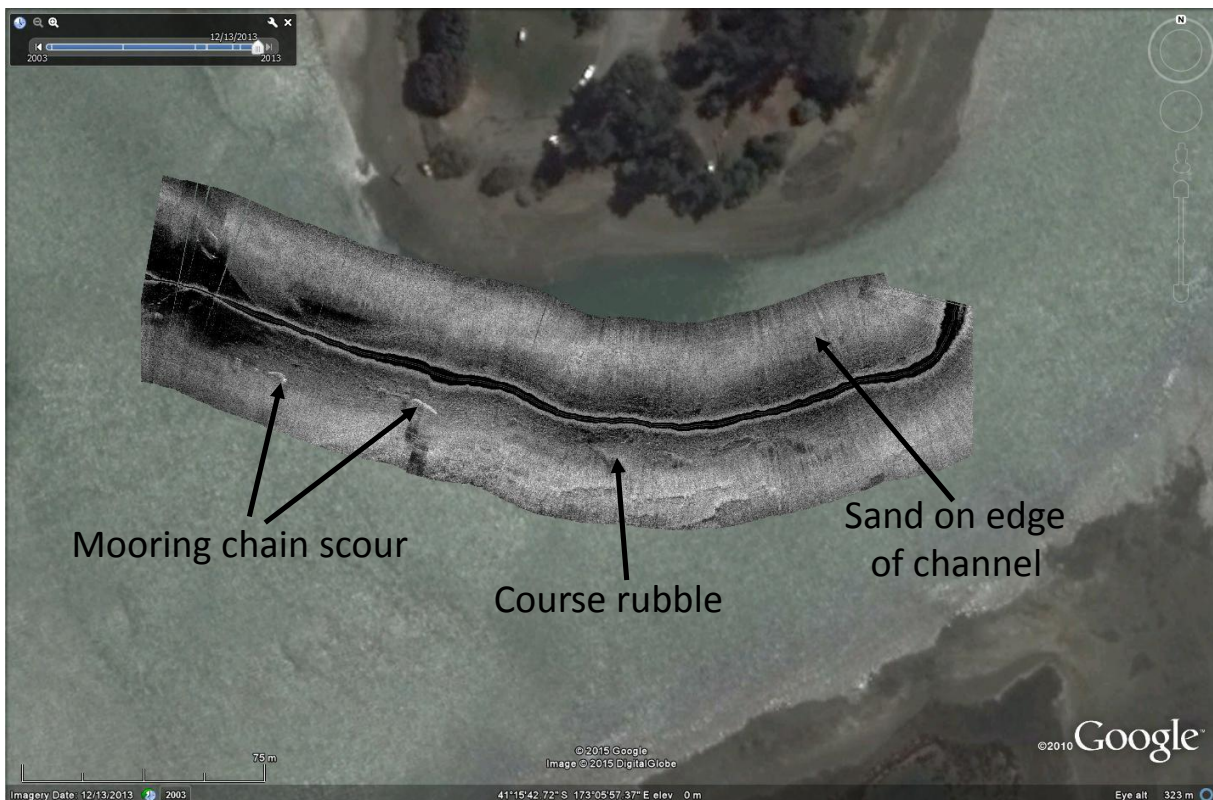


Figure 2-3: Dredge tows (D1-R10) situated near existing and potential mooring sites in Mapua channel.

## 3 Results

### 3.1 Side-scan sonar

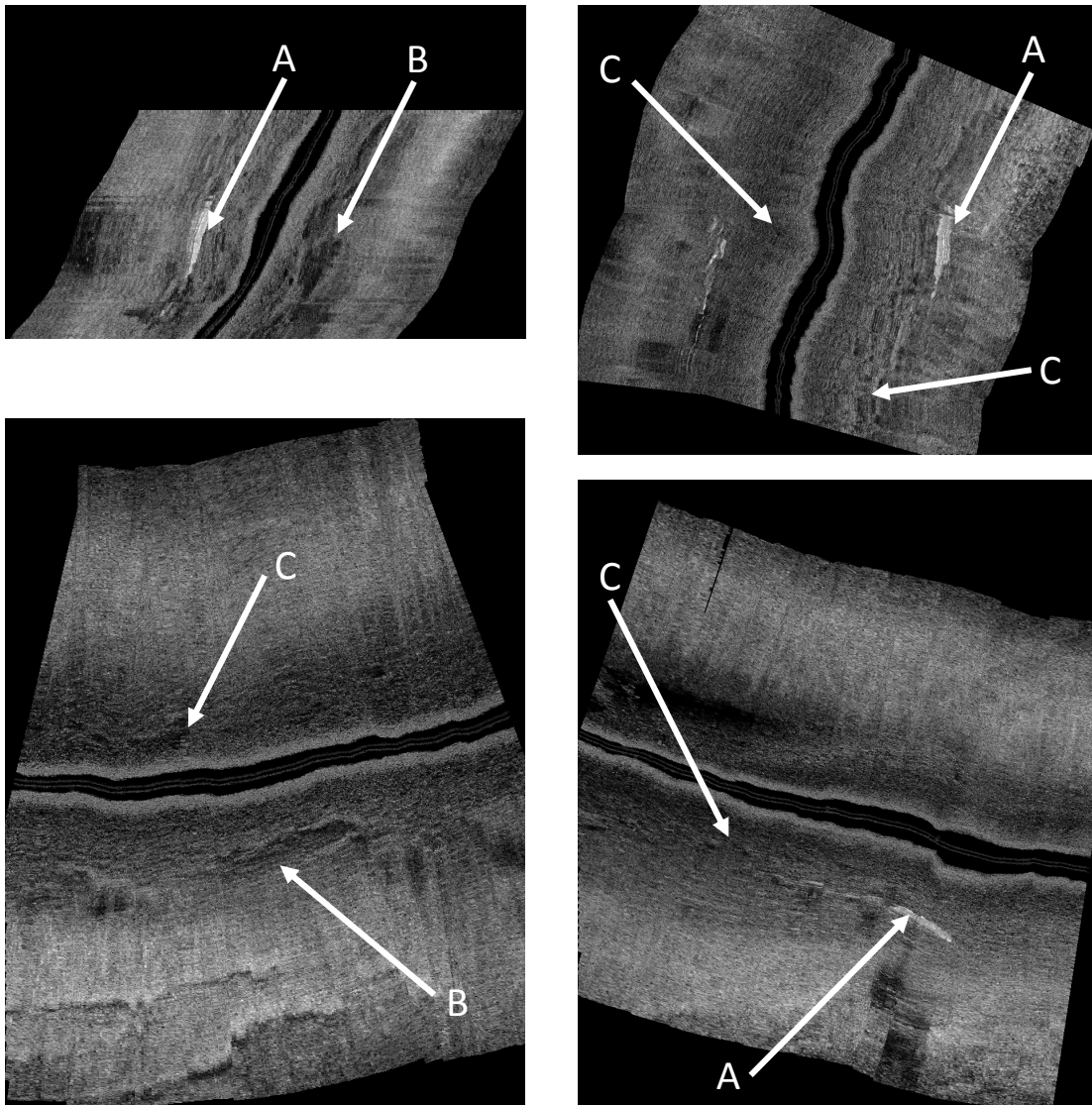
A large proportion (approximately 10 ha) of the sea floor within the Mapua channel, covering both the existing moorings, and the proposed new mooring areas were covered by the side-scan sonar (see Fig 2-1). No reefs or rocky outcrops were identified, with most of the sea floor appearing on the side-scan images as rubble over sandy sediments. Offshore of Grossi Point, the sea floor appeared to be more homogeneous, possibly sandy, with smaller areas of rubble (Fig 3-1).



**Figure 3-1: Side-scan sonar image off Grossi Point.** Size of sonar image is 240 m x 60 m.

Smaller portions of some of the original side-scan sonar files were reanalysed to show more detail in the images. Examples are shown in Fig 3-2.



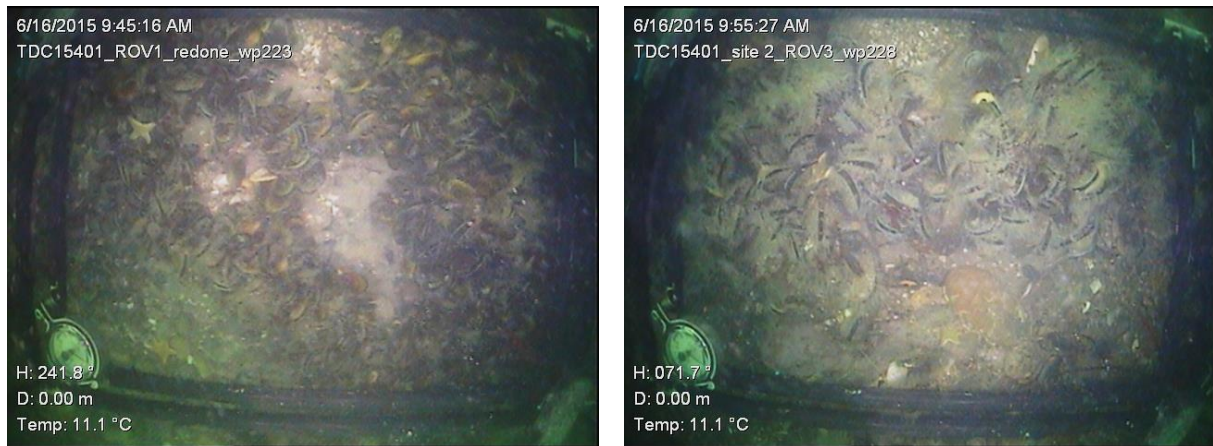


**Figure 3-2: Side-scan sonar images depicting sea floor features.** A= Mooring chain scour marks, lying parallel with tidal currents; B = tidal scour (hummocks and depressions) in sediment; C = Boulders and/or mussel beds. Width of each image = 60 m.

Scour marks were evident around some of the existing moorings, reflecting mooring chains dragging on the sediment with the changing tides. These scour marks were aligned parallel to the dominant tidal currents, i.e. along the axis of the channel, and were generally small, < 10 m in length. The textured appearance of the sediment throughout the area indicated the sea floor was comprised of cobbles and small boulders. This was confirmed by the video images and the dredge samples (see below). Video and dredge samples also contained dense populations of green lip mussels, *Perna canaliculus*, which also would have appeared as textured sediment in the side-scan sonar images. Parts of the soft sediment, particularly in the centre of the channel showed obvious hummocks and depressions, indicating the sediments is likely to be constantly shifting due to the strong tidal currents.

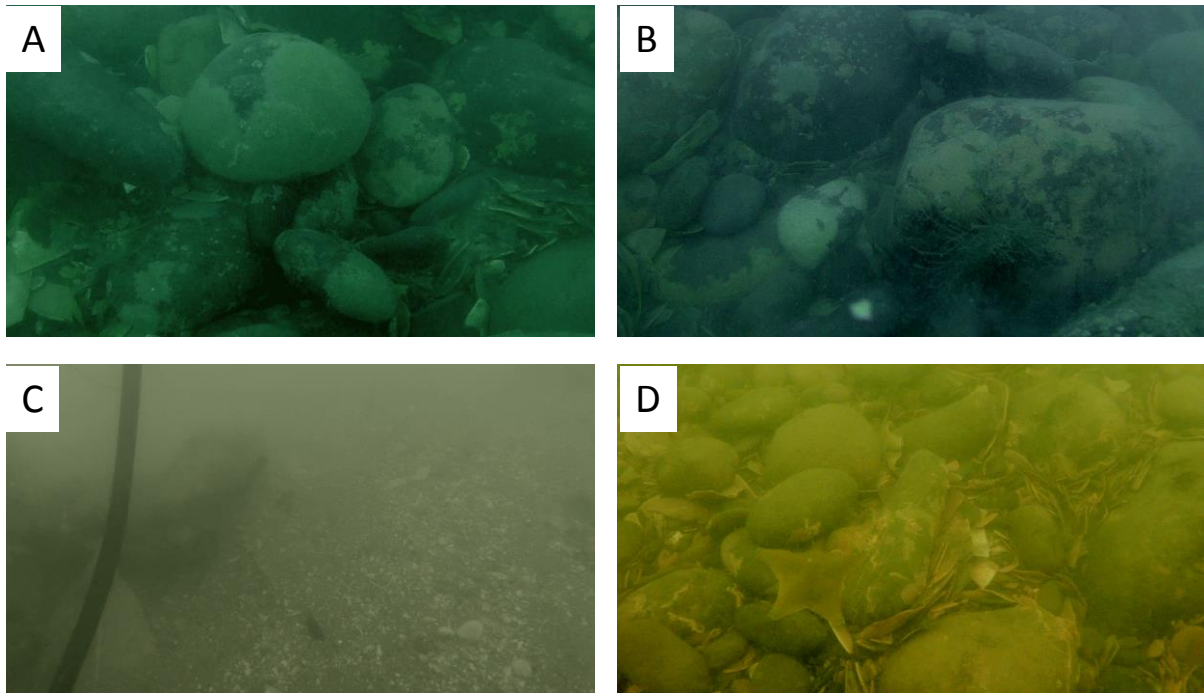
### 3.2 Underwater video

The video images confirmed features identified in the side-scan sonar files. The sea floor in the main portion of the channel comprised cobbles and small boulders up to approximately 20 cm in diameter, colonised by beds of green lip mussels. Other species recorded from this habitat were cushions stars (*Patiriella regularis*) (Fig 3-3) and small hydroid colonies. Small patches adjacent to some moorings in the main channel appeared to have had mussels removed by mooring chains as they dragged across the sea bed. This was apparent in the side-scan sonar images as acoustically reflective marks (see above).



**Figure 3-3: Benthic habitat in the Mapua Channel with dense beds of mussels and the occasional cushion star.** The image on the left was taken immediately adjacent to a mooring and potentially shows some of the mussels scraped clear by the chain.

Fig 3-4 shows frame grabs from the Go Pro video footage. The main Mapua channel is dominated by small boulders, while the sediment in the channel adjacent to Grossi Point is comprised of a mixture of coarse sand and cobbles (Fig 3-4 C, D).



**Figure 3-4: Frame grabs from remote underwater video.** A, B: small boulders in main Mapua channel. C, D: sand and cobbles in channel off Grossi Point.

### 3.3 Dredge tows

Depths of each station ranged from 2.9 m below MSL off Grossi Point to 5.3 m below MSL in the main channel off Mapua wharf. Sediments, ascertained by visual inspection of the dredge contents, were similar at all stations, dominated by gravel and cobbles with small boulders in the main channel, but these were replaced by sand off Grossi Point. The dredge samples confirmed the sea floor habitats recorded in the video tows (Table 3-1).

The epifauna collected by the dredge tows were characterised by mussels (*Perna canaliculus*) and the small spider crab (*Halicarcinus* sp), both of which occurred at all 10 stations. The half-crab (*Petrolisthes novaezelandiae*) and the cushion star (*Patiriella regularis*) were also widespread, occurring at all but one station. A complete list of all 44 taxa recorded from the dredge tows is shown in Appendix A.

A summary of the numbers of taxa and the dominant species that occurred at each dredge station is listed in Table 3-1. In general all samples contained a very similar suite of species. Green lip mussels dominated all but 2 stations, and other common species included the cushion star, *Patiriella regularis*, the crab *Petrolithes novaezelandiae*, and the shrimps *Periclimenes yaldwyni* and *Pontophilus australis*.

**Table 3-1: Characteristics of each dredge tow.** (Depths are expressed as m below MSL).

Sample	Depth (m)	Habitat description	No taxa recorded	Dominant species
D1	3.5	Cobbles/gravel	16	<i>Perna canaliculus</i> <i>Patiriella regularis</i> <i>Petrolisthes novaezelandiae</i>
D2	4.2	sand/gravel	29	<i>Perna canaliculus</i> <i>Pontophilus australis</i> <i>Buccinum linea</i>
D3	2.9	sand/gravel	14	<i>Periclimenes yaldwyni</i> <i>Buccinum linea</i> <i>Perna canaliculus</i>
D4	4	Cobbles/gravel	12	<i>Perna canaliculus</i> <i>Patiriella regularis</i> <i>Petrolisthes novaezelandiae</i>
D5	4.7	Gravel/sand/shell	9	<i>Perna canaliculus</i> <i>Patiriella regularis</i> <i>Petrolisthes novaezelandiae</i>
D6	4.5	Cobble/gravel	16	<i>Perna canaliculus</i> <i>Patiriella regularis</i> <i>Petrolisthes novaezelandiae</i>
D7	4.8	Cobble/gravel	11	<i>Perna canaliculus</i> <i>Patiriella regularis</i> <i>Petrolisthes novaezelandiae</i>
D8	5	Cobble/gravel	10	<i>Perna canaliculus</i> <i>Patiriella regularis</i> <i>Petrolisthes novaezelandiae</i>
D9	5.3	Small boulders/cobbles	10	<i>Patiriella regularis</i> <i>Perna canaliculus</i> <i>Petrolisthes novaezelandiae</i>
D10	4.4	Small boulders/cobbles	10	<i>Perna canaliculus</i> <i>Patiriella regularis</i> <i>Petrolisthes novaezelandiae</i>

## 4 Discussion

The area of Mapua channel presently zoned for swing moorings and the adjacent proposed area are tidal channels characterised by strong current flows that remove fine material from the sediment and, as a result, the sea floor is comprised of gravel, cobbles, and small boulders, with quantities of sand only exposed in the lesser current area around Grossi Point. The strong currents and prevalence of these relatively stable cobbles and boulders have provided attachment for large quantities of green lip mussels that occur along the length of the channel. Other species present in this habitat include a variety of starfish, crustaceans, and molluscs, all of which are common and widespread within Tasman Bay and the adjacent estuaries. Other than the mussel beds, no other beds of shellfish were recorded.

The existing swing moorings along the channel have a less than minor impact on the sea floor habitats and associated species. Short (< 10 m in length) scour marks are visible in the side-scan sonar images, aligned parallel with the channel and tidal flows, caused by vessels swinging with the tide. The moorings appear to have little to no effect on the coarse cobble and boulder habitat, except that the swinging chains have, in places, prevented mussels from colonising the boulders in small patches.

The entire channel, including the areas proposed as potential new mooring sites, are very similar in habitat and species to those in the existing mooring zone. Consequently, it is highly unlikely that any habitat, other than small areas of mussels, would be affected by new moorings if established in the proposed sites.

## 5 Acknowledgements

We thank Louis Olsen, Mike Page and Stephen Brown for their boating skills and assistance in the field, and Megan Carter for the laboratory analyses and species identifications.

## 6 References

- Davidson, R.J.; Moffat, C.R. 1990. A report on the ecology of Waimea Inlet, Nelson.  
Department of Conservation, Nelson/Marlborough Conservancy, Occasional Publication  
No 1. 160 p.
- Gillespie, P., Clark, K.; Conwell, C. 2007. Waimea Estuary State of Environment Monitoring:  
Fine scale benthic assessment, April 2006. Prepared for Tasman District Council and  
Nelson City Council. Cawthron Report No. 1315. 27 p.

## Appendix A Epifaunal species recorded from dredge tows, Mapua

Group	Taxa	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	Prevalence
Bivalvia	<i>Perna canaliculus</i>	277	12	2	279	107	176	12	125	19	172	10
Crustacea	<i>Halicarcinus</i> sp.	6	5	1	3	5	4	3	6	4	2	10
Asteroidea	<i>Patiriella</i> sp.	61	8		>20	15	92	13	90	65	22	9
Crustacea	<i>Petroliustes novaeseelandiae</i>	>60	8		>20	14	70	54	38	14	17	9
Crustacea	<i>Periclimenes yaldwyni</i>	7	8	7		3	6		22	6	6	8
Gastropoda	<i>Buccinum linea</i>	13	9	5	5		5	3		1	4	8
Gastropoda	<i>Xymene plebeius</i>	3	1		5		8	1	6	2	2	8
Gastropoda	<i>Lunella smaragda</i>	7	4	1	1		3		1	1		7
Hydrozoa	<i>Amphisbetia</i> sp.	p			p	p	p	p		p	p	7
Polychaeta	Polynoidae	1	1	1	1		1	3	1			7
Gastropoda	<i>Cantharidus tenebrus</i>		3		1	1			3	1	8	6
Crustacea	Isopoda			1	1		1	1			3	5
Gastropoda	<i>Cominella adspersa</i>	1	6		1	1		1				5
Actinopteri	Tripterygiidae					1	1			1	2	4
Gastropoda	<i>Cominella glandiformis</i>		4	1		1	1					4
Polyplacophora	<i>Acanthochitona zelandica</i>	2	8	1								3
Polyplacophora	Polyplacophora	3	1		7							3
Crustacea	<i>Austrohelice crassa</i>	2	1									2
Crustacea	<i>Pontophilus australis</i>		10	1								2
Gastropoda	<i>Diloma aethiops</i>	2		2								2
Platyhelminthes	Platyhelminthes		1					1				2
Polychaeta	Oweniidae		3				1					2
Actinopteri	<i>Rhombosolea leporina</i>			1								1
Anthozoa	Actiniaria			1								1
Asciacea	Asciacea						1					1
Bivalvia	<i>Crassostrea gigas</i>	1										1
Bivalvia	<i>Hiatula nitida</i>		1									1
Bivalvia	<i>Leptomysa retiaris</i>			1								1
Bivalvia	<i>Linucula hartvigiana</i>		4									1
Bivalvia	<i>Nuculana bellula</i>		1									1
Bivalvia	<i>Ostrea chilensis</i>								1			1
Crustacea	Cirripedia	>10										1
Crustacea	Mysida		1									1
Crustacea	Ostracoda		1									1
Crustacea	<i>Ovalipes catharus</i>		1									1
Echinoidea	<i>Fellaster zelandiae</i>		1									1
Gastropoda	<i>Amphibola crenata</i>								1			1
Gastropoda	<i>Epitonium tenellum (dead)</i>		0									1
Polychaeta	Glyceridae							1				1
Polychaeta	Nephtyidae		1									1
Polychaeta	Nereididae		6									1
Polychaeta	Serpulidae						1					1
Porifera	Porifera		1	p								1
Bryozoa	Bryozoa		p				p					0
	<b># taxa</b>	16	29	14	12	9	16	11	10	10	10	



## STAFF REPORT

**TO:** Environment & Planning Committee

**FROM:** Tania Bray, Policy Planner

**REFERENCE:**

**SUBJECT:**

PLAN CHANGE ##

2019

## REPORT ON ASSESSMENT OF ALTERNATIVES UNDER SECTION 32 OF THE RESOURCE MANAGEMENT ACT

# 1. INTRODUCTION

## *1.1 Purpose of the Report*

This report is prepared in accordance with Section 32 of the Resource Management Act (1991) (the Act). This requires that before adopting any objective, policy, rule or other method, the Council shall have regard to the extent to which each objective is the most appropriate way to achieve the purpose of this Act, and whether the policies, rules or other methods are the most appropriate for achieving the objectives.

This report assesses Plan Change No ##: Mooring and Coastal Management, a proposed change to the regional coastal plan in the Tasman Resource Management Plan (Plan).

## *1.2 Report Structure*

This report has been prepared to meet the requirements of Section 32 of the Act. It has been structured as follows:



## Contents

1. INTRODUCTION .....	1
1.1 Purpose of the Report.....	1
1.2 Report Structure.....	1
1.3 Proposed Plan Change .....	3
1.3.1 Issue/ background .....	3
1.3.2 Objectives or Purpose of the Plan Change.....	5
1.3.3 Key components of the Proposed Plan Change .....	6
2. LEGISLATIVE FRAMEWORK.....	8
2.1 Resource Management Act 1991 (s.63 to 68).....	8
2.1.1 The New Zealand Coastal Policy Statement (NZCPS).....	9
2.1.2 The Crown's Interests in the Coastal Marine Area .....	26
2.2 Management Plans and Strategies Prepared Under other Acts.....	26
2.2.1 Abel Tasman Foreshore Scenic Reserve Management Plan (2012).....	30
2.2.2 The Westhaven Marine Reserve and Wildlife Management Reserve. ....	33
2.2.3 Farewell Spit Bird Nature Reserve .....	34
2.2.4 Able Tasman National Park.....	34
2.2.5 Tonga Island Marine Reserve. ....	37
2.2.6 Tasman District Council Consolidated Bylaw.....	38
2.3 Planning Document Recognised by an Iwi Authority. ....	38
2.4 Regional Policy Statements and Regional Plans .....	43
2.4.1 Tasman Regional Policy Statement (2001) (TRPS) .....	44
2.4.2 Tasman Resource Management Plan (Plan) .....	47
3. PLAN CHANGE DEVELOPMENT .....	54
3.1 Process .....	54
3.2 Consultation .....	55
3.3 Site visits.....	56
4 DO THE PLAN CHANGE OBJECTIVES ACHIEVE THE PURPOSE OF THE ACT?...58	
4.1 Plan Change Objectives. ....	58
4.1.1 Objectives .....	58
4.1.2 Assessment.....	59
5. DO THE PROPOSED CHANGES ACHIEVE THE OBJECTIVES OF THE PLAN CHANGE? .....	61
5.1 Options for Achieving the Objectives.....	61
5.1.1.....	61
5.1.2.....	63
5.1.3.....	63
5.1.4.....	64
5.1.5.....	64
5.1.6.....	65
5.1.7.....	66
5.1.8.....	66
5.1.9.....	67
5.1.10.....	67

5.1.11.....	68
5.1.12.....	68
5.2 Assessment of the Costs and Benefits.....	69
5.2.1.....	69
5.2.2.....	74
5.2.2.....	78
5.2.3.....	79
5.2.4.....	83
5.2.5.....	88
5.3 Reasons for Deciding on the Provisions.....	90
5.4 Iwi Advice and the Response.....	91
APPENDICES .....	93
Appendix A.....	94
TASMAN DISTRICT COUNCIL.....	94
Draft Plan Change No. ##.....	94
Appendix A(2).....	94
TASMAN DISTRICT COUNCIL.....	94
Chapter #.....	94
Mooring Area Bylaw .....	94
Appendix B: Biological Report in relation to proposed mooring areas located between Waimea Inlet and Whanganui Inlet: biological features, habitats and issues.....	95
Appendix C: Assessment of shorebird use of proposed boat mooring sites at Otuwhero/Marahau and Motueka .....	96
Appendix D: Assessment of the Impacts of the Proposed Coastal Plan change on Historic Heritage in Tasman.....	97
Appendix E: Seabed survey of mooring areas, Mapua Inlet .....	98
Appendix F Assessment of Demand of Moorings in the Proposed Mooring area and the impact on recreation and navigation.....	99
Appendix G: Visual Natural Character and Landscape effects Assessment.....	100
Appendix H: Effects of Mooring on Different types of Marine Habitat.....	101

## ***1.3 Proposed Plan Change***

### **1.3.1 Issue/ background**

The current regional coastal plan was first drafted and then notified in 1995. Since then a number of issues within the coastal marine area have arisen and two key documents which influence the management of the coastal marine area have been created - the Marine and Coastal Area (Takutai Moana) Act 2011 (MACA) and New Zealand Coastal Policy Statement 2010 (NZCPS). As a result, the regional coastal plan is in need of updating. A full review of the regional coastal plan will commence in 2021.

The key drivers for this plan change are explained more fully as follows.

**Strategic Planning:** the coastal environment contains a wide range of uses and values, many of which are fundamental to the economic and social

wellbeing of Tasman communities. Tasman's coastal environment is diverse containing many significant natural resources. Under the NZCPS there is a need to strategically plan for coastal uses to ensure development is located in appropriate places and the effects on the environment are minimised.

Recreational use in the coastal marine area in Tasman is high, and over the years a large number of moorings have been established to provide storage for recreational and commercial craft. Only 1/3 of the current moorings are authorised by a resource consent in appropriate locations, with the remaining 2/3 unapproved and requiring resource consent. These unauthorised (mostly historic moorings) have been established over the years without formal considerations of their impact on the environment and other coastal users. These moorings are often inappropriately located in significant natural areas.

Network utilities like, power, water and sewage are essential for community wellbeing and many of these community assets are located near and within the coastal marine area. In the past these utilities' have proven to be vulnerable to damage from other coastal uses. Once damage has been done it can be expensive and difficult to repair, and the impacts on the community from the loss of services can be significant. Care is needed when establishing new uses that those uses do not adversely affect existing network utilities and are located away from important infrastructure.

### **Equity**

The cost of installing and owning an unauthorised mooring is often negligible when compared to a consented mooring. Most consented moorings have conditions attached requiring regular maintenance and monitoring. Often the types of boats which are moored in the district are entry level recreational craft and the cost of obtaining and maintaining a consented mooring can be disproportionate to the value and use of the boat under the current planning framework. The current situation provides a perverse outcome with significant inequity between authorised and unauthorised mooring owners.

### **Obsolete, Abandoned and Unauthorised Structures**

The MACA, requires Council to maintain an accurate record of the ownership of all coastal structures. While this is easy for coastal structures with resource consent, many structures are historic and predate the current legislation; some are permitted with no recorded owner, others have simply been abandoned once they were no longer required. Council needs a process for determining the ownership of permitted, obsolete, abandoned and unauthorised structures to meet the requirements of the Act.

The NZCPS also requires Council to promote the efficient use of space by removing abandoned and redundant structures in the coastal marine area. Under the current planning framework there is no rule providing for the removal of coastal structures. While the MACA and the Resource Management Act 1991 (RMA) permits Council to remove some structures, it is currently easier

and cheaper to leave structures where they are, often to the detriment to public use of the coastal marine area.

**Navigation and Safety** There are a number of homemade moorings in the district which often are not regularly maintained. During storm events it is not uncommon for these moorings to fail and for the moored boat to float free. These boats then become a navigational hazard and the recapture of these boats during bad weather can be particularly hazardous to maritime staff, as well as causing considerable damage to other boats and structures in the area. There is a need for all moorings to be built and maintained to a standard that ensures navigational safety for all coastal users, which is not currently the case.

**Minor Amendments:**

The Plan was drafted in the early 1990'S and gives effect to the previous New Zealand Coastal Policy Statement (1994) which was in place at the time. Since then a new NZCPS has been gazetted and Council is required to give effect to the new policy statement. The plan change provides an opportunity to update some of the wording in the Plan to better align with the wording 2010 NZCPS. Similarly out of date references to Ministers, Ministries, and Acts also need to be updated. The changes identified are minor amendments and do not constitute a substantive review of the Plan in accordance with the NZCPS (2010). The substantive review is programmed for 2021.

**Integrated Planning:** Various sections within the RMA and NZCPS require Council to consider other planning documents when drafting plan changes, to ensure the proposed plan change is not developed in isolation from other relevant policy documents. In this instance the plan change provides an opportunity to give effect to policy within the Abel Tasman Foreshore Reserve Management Plan (2012) which requires existing unauthorised structures within the reserve areas be authorised or removed by 30 June 2014. There is an opportunity through this plan change to authorise some existing public use structures (both consented and unconsented) by providing for them as permitted activities.

### **1.3.2 Objectives or Purpose of the Plan Change**

An evaluation under Section 32 is important to ensure transparent, robust decision-making in RMA plans. Section 32 requires new proposals to be examined for their appropriateness in achieving the purpose of the RMA, and the policies and methods of those proposals to be examined for their effectiveness and risk. The first part of the Section 32 requires the objectives or purpose of the plan change to be assessed against the purpose of the RMA.

The objectives of this plan change are:

1. **Efficient use of space:** a) enable and provide for efficient and flexible use of space within the coastal marine area for moorings; b) promote and provide for

the removal of obsolete, redundant or abandoned structures within the coastal marine area; and c) encourage the establishment of public moorings to enable the greatest use of space.

2. **Allocation of Coastal Space:** provide an alternative method of allocation of space for moorings, within defined Mooring Areas.
3. **Strategic Planning:** a) identify appropriate areas for permanent mooring and provide for moorings in those areas; b) prevent new coastal activities from adversely affecting moorings within the Mooring Areas; c) prevent new coastal activities from adversely affecting existing network utilities within the coastal marine area.
4. **Navigation and Safety:** a) require all moorings to be located, constructed and maintained to a standard that supports the navigational safety of all coastal users; b) establish Mooring Areas in locations which do not effect recognised anchorages or maritime routes within the coastal marine area. c) enable the removal of obsolete, redundant or abandoned structures within the coastal marine area.
5. **Integrated planning:** a) Support the requirements of the Marine and Coastal Area Act 2011 by introducing provisions which enable a record of all owners of coastal structure owners to be kept. b) Authorise key public structures on the foreshore and coastal marine area adjacent to the Abel Tasman National Park, where appropriate, to give effect to policy (in part) in the Abel Tasman Scenic Foreshore Reserve Management Plan regarding unauthorised structures.

### 1.3.3 Key components of the Proposed Plan Change

The key components of the plan change are summarised as follows:

- Establishment of appropriately located Mooring Areas at Mapua, Motueka Tapu Bay, Stephens Bay, Kaiteriteri, Otuwhero Inlet (Marahau), Torrent Bay, Boundary Bay, Milnthorpe and Mangarakau Wharf.
- Protection of Mooring Areas from the adverse effects of other coastal activities.
- Minimisation of space used for moorings by providing appropriate areas, enabling management within, encouraging public moorings, removing unauthorised, abandoned, redundant or obsolete moorings and requiring the use of space efficient mooring systems, where practical and appropriate.
- Require the removal of unauthorised, abandoned, obsolete or redundant structures affecting natural character, habitats and ecosystems, natural features and public access, except where the removal would have adverse effects, including on historic heritage.
- Encourage moorings to locate in appropriately located Mooring Areas.

- Amendments to the policy for Kaiteriteri regarding the number of structures within the Bay.
- Amendments to the public access policy to require regard to be had to the functional need for occupation in the coastal marine area.
- New policy supporting public and multi-use structures and public access in the coastal marine area.
- New condition for permitted activities within 20m of an existing network utility.
- A new condition for the maintenance, repair or replacement of existing structures (relating to craft).
- A rule providing for moorings in Mooring Areas as permitted activities subject to conditions being met and the mooring owner holding a mooring licence issued by the Harbourmaster under a Moorings Bylaw.
- Require owners of permitted activity structures to provide contact details.
- Require structures be maintained free from any biosecurity risk organisms.
- Provide for moorings in locations outside of Mooring Areas as a discretionary or prohibited activity.
- New conditions and assessment matters regarding biosecurity.
- Permit the removal of coastal structures, subject to conditions.
- Permit discharge from structures being removed, subject to conditions.
- Amend Schedule 25A (Permitted Coastal Structures) by deleting some structures from the list and including other structures as permitted activities.
- Minor amendments to the text to better reflect the NZCPS and to update references to various Ministers, Ministries and Acts and bylaws within the Plan.

## 2. LEGISLATIVE FRAMEWORK

Section 32 evaluations under the RMA do not take place in isolation, but are part of a wider resource management framework that sets the purpose, principles, roles, responsibilities and scope for plan making. In addition, to considering the appropriateness of the plan change in achieving the purpose of the RMA, there is a hierarchy of Acts, plans and policy statements which must be considered and which often determine what can be included in a plan change. The broader framework in which this plan change has been drafted is discussed below.

### ***2.1 Resource Management Act 1991 (s.63 to 68).***

Under Section 66 of the RMA, Council is required to prepare a plan change in accordance with national planning documents prepared under the RMA and also to have regard to other documents prepared by Council and other organisations. This broad evaluation against other resource management policy documents ensures that the plan change is not developed in isolation.

Under Section 66(1) Council is required to prepare this plan change in accordance with national policy statements. The NZCPS is considered to be the only relevant national policy statement for this plan change (see Section 2.1.1. of this evaluation for the NZCPS assessment.)

In addition Section 66 (2) requires the Council to have regard to:

- (2) (b) *The Crown's interests ... in the coastal marine area; and*
- (c) *Any—*
  - (i) *Management plans and strategies prepared under other Acts;*
  - ...
  - (d) *The extent to which the regional plan needs to be consistent with the regional policy statements and plans, or proposed regional policy statements and proposed plans, of adjacent regional councils: ...”*

(see Sections 2.1.2 and 2.2)

Section 66 (2A) requires Council when preparing a plan change to address any planning document lodged by an iwi authority or a customary marine title group. The plan change is considered with regard to the Ngati Tama ki Te Waipounamu Trust – Environmental Plan 2018 in Section 2.3 of this report.

Section 67 to 70 of the RMA sets out what may and may not be included in a regional coastal plan. These sections provide a framework for the content of the plan. Of special importance is Section 67(3) and which requires Council to give effect to:

- (3) (a) *any national policy statement; and*

- (b) any New Zealand coastal policy statement; and*
- (c) any regional policy statement.*

*And*

- (4) A regional Plan must not be inconsistent with-*
  - (b) any other regional plan in the region; ..*

An assessment against the NZCPS, Tasman Regional Policy Statement and Tasman Resource Management Plan can be found in Sections 2.1.1, 2.4.1 and 2.4.2.

Section 67(5) of the RMA requires Council to record in the plan how it has allocated a natural resource under Section 30(1)(fb) and (4) of the RMA. In this plan change (and the accompanying bylaw) there is a new method for allocating space within the proposed Mooring Areas. Section 165G of the RMA enables allocation rules to be included in a plan but, before proposing such a rule the Council is required to prepare a separate report assessing the matter. For this reason the allocation of mooring space within Mooring Areas are not assessed further in this Section 32 report. The Section 165H assessment report is currently being drafted and will be available when the plan change is formally notified.

## **2.1.1 The New Zealand Coastal Policy Statement (NZCPS)**

The NZCPS sets out general objectives and policies for the sustainable management of New Zealand's coastal environment. The plan change is required to give effect to the objectives and policies of the NZCPS. The plan partially gives effect to the NZCPS and until a point in time that the NZCPS is fully given effect, to significant weight is given to the objectives and policies of the NZCPS in drafting the plan change.

The following objectives and policies are relevant to the plan change.

### **2.1.1.1.**

#### **Objective 1:**

*To safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems, including marine and intertidal areas, estuaries, dunes and land, by:...*

An assessment of the effects for the proposed Mooring Areas has been undertaken (see Appendices B to G). Where a potential impact was identified the boundaries of the mooring area were either amended or further investigations undertaken to establish the extent of the impact. The proposed Mooring Areas all occur in historic mooring areas with long term use.

The plan change includes new provisions encouraging the removal of unwanted coastal structures. It is acknowledged that the removal of a structure could affect



functioning of the coastal environment through seabed disturbance and sedimentation, however, the conditions imposed on removal are expected to limit those effects and the effects are anticipated to be minor and transient.

Overall, it is anticipated that the plan change will have minimal if any effect on the integrity, form, functioning and resilience of the coastal environment and that Objective 1 of the NZCPS will be given effect to.

### **2.1.1.2 Objective 2, Policy 11, Policy 13, Policy 14 and Policy 15.**

#### **Objective 2:**

*To preserve the natural character of the coastal environment and protect natural features and landscape values through:*

- *recognise the characteristics and qualities that contribute to natural character, natural features and landscape values and their location and distribution;*
- *identify those areas where various forms of ... use and development would be inappropriate and protecting them from such activities; ...*

#### **Policy 11 Indigenous biological diversity (biodiversity)**

*To protect indigenous biological diversity in the coastal environment:*

*(a) avoid adverse effects of activities on:*

- (i) indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists;*
- (ii) taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened;*
- (iii) indigenous ecosystems and vegetation types that are threatened in the coastal environment, or are naturally rare;*
- (iv) habitats of indigenous species where the species are at the limit of their natural range, or are naturally rare;*
- (v) areas containing nationally significant examples of indigenous community types; and*
- (vi) areas set aside for full or partial protection of indigenous biological diversity under other legislation; and*

*(b) avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on:*

- (i) areas of predominantly indigenous vegetation in the coastal environment;*
- (ii) habitats in the coastal environment that are important during the vulnerable life stages of indigenous species;*
- (iii) indigenous ecosystems and habitats that are only found in the coastal environment and are particularly vulnerable to modification, including estuaries, ..., eelgrass ...;*
- (iv) habitats of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes;*
- (v) habitats, including areas and routes, important to migratory species; and*

*(vi) ecological corridors, and areas important for linking or maintaining biological values identified under this policy.*

### **Policy 13 Preservation of natural character**

*(1) To preserve the natural character of the coastal environment and to protect it from inappropriate ... use, and development:*

*(a) avoid adverse effects of activities on natural character in areas of the coastal environment with outstanding natural character; and*

*(b) avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on natural character in all other areas of the coastal environment;...*

### **Policy 14 Restoration of natural character**

*Promote restoration or rehabilitation of the natural character of the coastal environment, including by:...*

*(a) Identifying areas and opportunities for restoration or rehabilitation:..*

### **Policy 15 Natural features and natural landscapes**

*To protect the natural features and natural landscapes (including seascapes) of the coastal environment from inappropriate subdivision, use, and development:*

*(a) avoid adverse effects of activities on outstanding natural features and outstanding natural landscapes in the coastal environment; and*

*(b) avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of activities on other natural features and natural landscapes in the coastal environment;*

Ecological assessments have been undertaken for all of the proposed Mooring Areas and important areas identified as potentially being effected by were removed from the plan change<sup>1</sup>. Ligar Inlet was initially proposed as a Mooring Area and following concerns raised an alternative area was proposed<sup>2</sup>. The alternative area when considered further was found to pose a navigation and safety risk and ultimately the decision was made to not proceed with any Mooring Area in Ligar Bay.

The plan change proposes to provide for the removal of coastal structures as a permitted activity<sup>3</sup>. The plan change includes a condition that any “damage to animal or plan communities does not exceed the minimal practical foot print required for access and removal or have any significant adverse effects on aquatic life”. Rule 36.2.2- Discharge arising from the removal of coastal structures, as a condition requires “(a) None of the following effects are likely to arise in the receiving waters, after reasonable mixing:...(v) any significant adverse effects on aquatic life and birdlife.” It is considered that the plan change gives effect to Policy 11.

---

<sup>1</sup> Appendices B, C, E and G

<sup>2</sup> See Appendix B –Section 4.3.1

<sup>3</sup> Rule 25.1.5.7

An assessment has been undertaken regarding the effects of the proposed Mooring Areas and the new Schedule 25.B structures<sup>4</sup> on the visual, natural character and the landscape. On balancing the considerations, the report found that the adverse visual, natural character and landscape effects were assessed as negligible. With regard to the cumulative adverse 'landscape' effects, it was found that the extensive scale of the coastline and the spaced arrangements of the proposed mooring areas would ensure that the coastline would not be dominated by moored vessels. The report also found that the very discrete nature of the structures proposed to be included in Schedule 25.B, as well as the spacious arrangement within the Abel Tasman National Park would ensure that structures would not dominate<sup>5</sup>.

It is anticipated that the proposed rule<sup>6</sup> enabling the removal of structures from the CMA will over time lead to unauthorised and abandoned structures being removed from the coastal marine area with the enhancement of natural character as a consequence.

It is considered that the plan change will give effect to Policies 13, 14 and 15 of the NZCPS.

### **2.1.1.3 Objective 3 and Policy 2**

#### **Objective 3**

*To take account of the principles of the Treaty of Waitangi, recognise the role of tangata whenua as kaitiaki and provide for the tangata whenua involvement in management of the coastal environment by: ...*

- *promoting meaningful relationships and interactions between tangata whenua and persons exercising functions and powers under the Act;*
- *recognising and protecting characteristics of the coastal environment that are of special value to tangata whenua.*

#### **Policy 2-The Treaty of Waitangi, tangata whenua and Maori heritage**

*In taking account of the principles of the Treaty of Waitangi (Te Tiriti o Waitangi), and kaitiakitanga, in relation to the coastal environments:*

- (a) recognise that tangata whenua have traditional and continuing cultural relationships with areas of the coastal environments, including places where they have lived and fished for generations;*
- (b) involve iwi authorities or hupu on behalf of tangata whenua in the preparation of ...plans, by undertaking effective consultation with tangata whenua; with such consultation to be early, meaning full, and as far as practicable in accordance with tikanga Maori;...*

Council recognises that the coastal marine area of Te Tau Ihu is of significance to Ngāti Apa ki te Rā Tō, Ngāti Kuia, Rangitāne o Wairau, Ngāti Koata, Ngāti Rārua, Ngāti Tama ki Te Tau Ihu, Te Ātiawa o Te Waka-a-Māui and Ngāti Toa Rangatira. In particular, the areas proposed for moorings at Westhaven, Parapara, Otuwhero Inlet,

---

<sup>4</sup> Appendix A – page 25

<sup>5</sup> Appendix G

<sup>6</sup> Rule 25.1.5.7

Boundary and Torrent Bay/ Rākauroa, Kaiteriteri and Moutere inlet are identified in the Statutory Acknowledgement as of particular importance to iwi. In addition, several important cultural; heritage precincts adjoin the proposed Mooring Areas.

Iwi have been consulted with regarding the contents of the plan change throughout the plan changes drafting. Matters raised by Te Ātiawa Manawhenua Ki Te Tau Ihu Trust on the effects of moorings and proliferation of structures have been considered and partially addressed through the plan change (see Section 5.4). No other matters have been raised by iwi at this point in time.

Heritage New Zealand/Pouhere Taonga have no concerns regarding the effect the proposed Mooring Areas may have on heritage values<sup>7</sup>.

### **2.1.1.3 Objective 4, Policy 18 and Policy 19**

#### *Objective 4*

*To maintain and enhance the public open space qualities and recreational opportunities of the coastal environment by:*

- *Recognising the coastal marine areas is an extensive area of public space for the public to use and enjoy.*
- *Maintaining and enhancing public walking access to and along the coastal marine area without charge...*

#### **Policy 18 Public Open Space**

*Recognise the need for public open space within and adjacent to the coastal marine area, for public use and appreciation including active and passive recreation, and provide for such public open space, including by:*

- (a) ensuring that the location and treatment of public open space is compatible with the natural character, natural features and landscapes, and amenity values of the coastal environment;*
- (b) taking account of future need for public open space within and adjacent to the coastal marine area, including in and close to cities, towns and other settlements;*
- (c) maintaining and enhancing walking access linkages between public open space areas in the coastal environment...*

#### **Policy 19 Walking Access**

- (1) Recognise the public expectation of and need for walking access to and along the coast that is practical, free of charge and safe for pedestrian use.*
- (2) Maintain and enhance public walking access to, along and adjacent to the coastal marine area, including by:...*
  - (a) Avoiding, remedying or mitigating any loss of public walking access resulting from the ...use, or development; and*

---

<sup>7</sup> Pers comm. Email.

- (b) Identifying opportunities to enhance or restore public walking access, for example where:...*
- (3) *Only impose a restriction on public walking access to, along or adjacent to the coastal marine area where such a restriction is necessary:...*

The proposed changes should maintain and enhance the provision of public space by consolidating and reducing the current spread of moorings. The changes are also intended to enhance recreational use by providing a simple, flexible, lower cost option for those boats needing to be stored in the coastal marine area. The addition of several existing public structures to Schedule 25.B, as permitted activities, will also support recreational use of the coastal marine area. The proposed Mooring Areas have been set back from the foreshore, maintaining and enhancing public access in some areas e.g. Otuwhero. In the larger mooring areas e.g. Mapua, access strips have been proposed to provide for passage through the area. Finally, the proposed Mooring Areas have been located outside of navigational routes and anchorages. An assessment of the effects of the mooring areas on recreation can be found in Appendix F. Note the recreation assessment was undertaken several years ago and many of the projections are very possibly out of date. The report has been retained in this plan change, however, as the general findings are still thought to be valid.

It is considered that the plan change gives effect to Objective 4, Policy 18 and Policy 19 of the NZCPS.

### **2.1.1.4 Objective 6 and Policy 6**

#### **Objective 6**

*To enable people and communities to provide for their social, economic, and cultural wellbeing and their health and safety, through ..., use, ..., recognising that:*

- the protection of the values of the coastal environment does not preclude use and development in appropriate places and forms, and within appropriate limits;*
- some uses and developments which depend upon the use of natural and physical resources in the coastal environment are important to the social, economic and cultural wellbeing of people and communities;*
- functionally some uses and developments can only be located on the coast or in the coastal marine area; ...*
- the protection of habitats of living marine resources contributes to the social, economic and cultural wellbeing of people and communities;...*
- historic heritage in the coastal environment is extensive but not fully known, and vulnerable to loss or damage from inappropriate ..., use, ....*

#### **Policy 6 Activities in the coastal environment**

*(1) In relation to the coastal environment:*

*(a) recognise that the provision of infrastructure, the supply and transport of energy including the generation and transmission of electricity ... are activities important to the social, economic and cultural well-being of people and communities:...*

*(h) consider how adverse visual impacts of development can be avoided in areas sensitive to such effects, such as headlands and prominent ridgelines, and as far as practicable and reasonable apply controls or conditions to avoid those effects:...*

*(j) where appropriate, buffer areas and sites of significant indigenous biological diversity, or historic heritage value.*

*(2) Additionally, in relation to the coastal marine area:...*

*(b) recognise the need to maintain and enhance the public open space and recreation qualities and values of the coastal marine area;*

*(c) recognise that there are activities that have a functional need to be located in the coastal marine area, and provide for those activities in appropriate places;...*

*(e) promote the efficient use of occupied space, including by:*

*(i) requiring that structures be made available for public or multiple use wherever reasonable and practicable;*

*(ii) requiring the removal of any abandoned or redundant structure that has no heritage, amenity or reuse value;*

*(iii) consider whether consent conditions should be applied to ensure that space occupied for an activity is used for that purpose effectively and without unreasonable delay.*

**Objective 6** -The plan change recognises and protects the values of the coastal environment through carefully selected sites for mooring. An assessment of effects has been undertaken<sup>8</sup> and mooring within the proposed Mooring Areas is considered an appropriate use of that space. By encouraging moorings to locate within the Mooring Areas, removal of unauthorised moorings, and a requirement for a resource consent to establish a new mooring outside of the Mooring Area should place appropriate limits on the number of moorings within the district.

The plan change amends the existing provisions in the Plan and continues to provides for craft which need to moor within the coastal marine area. A number of landowners adjoining the Able Tasman National Park rely on water transport to access their properties and require a mooring when their boat is not in use. The plan change continues to provide for this access, but restricts ownership of moorings to landowners.

Commercial operators need to moor their boats close to commercial routes, particularly during the summer high season. The plan change continues to provide moorings for boats but restricts the use of moorings in Kaiteriteri Mooring Area 2, for commercial use. To balance any loss of public use in Kaiteriteri 2, for mooring, the plan change proposes to make the adjoining Kaiteriteri Mooring Area 1 available

---

<sup>8</sup> Appendices B-G

long term for public use. It is acknowledged that commercial boat operators have an important role providing community wellbeing and employment, and enabling large numbers of people to access the coastal marine area and national park. The proposed provisions provide for this appropriate activity.

The proposed Mooring Areas are located away from important habitats<sup>9</sup>.

The proposed changes are unlikely cause loss or damage to any site of historic heritage<sup>10</sup>. The proposed Mooring Areas are located in areas of long term mooring use and it is unlikely “new” disturbance would occur to unrecorded archaeological sites. Proposed policy <sup>11</sup>providing for the removal of unwanted structures, excludes structures with heritage or cultural values. The proposed rule<sup>12</sup> regarding the removal of a structure listed with Heritage New Zealand or listed in Schedule 16.13 of the TRMP, has been made a discretionary activity.

It is considered the plan change gives effect to Objective 6 of the NZCPS.

**Policy 6(1)(a)**- The proposed plan change includes provisions which require assessment of the effects of coastal occupations/structures on existing network utilities, including transmission lines. The rules also require identification of the correct location of existing network utilities, to help prevent damage by new structures. Proposed rule 25.1.5.7(h) conversely requires existing utilities not to be damaged when structures are removed. These rules recognise the importance of network utilities for the social, economic and cultural well-being of people and communities, and seeks to prevent damage to those network utilities.

**Policy 6(1)(h)** *consider how adverse visual impacts of development can be avoided in areas sensitive to such effects, such as headlands and prominent ridgelines, and as far as practicable and reasonable apply controls or conditions to avoid those effects:...*

The effects of the proposed Mooring Areas and the Schedule 25.B structures on the visual, natural character and the landscape has been assessed. On balancing the considerations, the assessment report found that the adverse visual and landscape effects of the Mooring Areas and structures were negligible.<sup>13</sup>

**Policy 6(1)(j)** *where appropriate, buffer areas and sites of significant indigenous biological diversity, or historic heritage value.*

The plan change locates Mooring Areas away from significant areas of indigenous biological diversity<sup>14</sup>. The majority of the Mooring Areas are also located away from known historic heritage sites, with the exception of the Motueka Mooring Area 1 and the Mapua Mooring Area. The effects these two mooring areas on the adjoining

---

<sup>9</sup> Appendix B

<sup>10</sup> Appendix D

<sup>11</sup> Appendix A 21.6.3.#

<sup>12</sup> Appendix A ###

<sup>13</sup> Appendix G

<sup>14</sup> Appendix B

historic wharf areas has been assessed <sup>15</sup> and it is considered that the proposed mooring areas are consistent with the current and historical uses, and are appropriate activities at those locations.

***Policy 6(2)(b) recognise the need to maintain and enhance the public open space and recreation qualities and values of the coastal marine area;***

The proposed changes will maintain and enhance public open space by providing for mooring in appropriate locations, encouraging efficient moorings within those areas and requiring the removal of abandoned or redundant structures. It is expected that in time the number of unauthorised coastal structures will decline. Policy 21.2.3.15 has been amended but continues to restrict the number of structures in Kaiteriteri for the purpose of retaining open public space. The proposed changes are anticipated to maintain and enhance recreational opportunities by providing a low cost, simple method for obtaining a mooring in appropriate locations, where there is demand<sup>16</sup>. The plan change also proposes to amend the existing mooring provisions (outside of the Mooring Areas) to provide greater flexibility and efficiency in the type of mooring used.

In consultation with the Department of Conservation, the plan change also proposes to provide for a number of important recreational structures in the coastal marine area, as permitted activities, e.g. the boardwalks between Marahau and ATNP. Policies elsewhere provide for specific structures e.g. Policy 21.2.3.15 provides for the existing swimming platform at Kaiteriteri. Policy 20.1.3.2# prevents the establishment of other occupations within the mooring areas where the occupation will adversely affect the use of the area for mooring. Rule 25.1.2.1(e) provides for the repair and maintenance of structures (including recreational structures) as a permitted activity, subject to conditions, including where there is no change in the character, intensity or scale of the structure.

In identifying appropriate locations for the Mooring Areas careful consideration was undertaken to avoid adversely affecting the recreational values provided by important anchorages and navigation routes. Policy 20.1.3.# seeks to reduce the navigational and safety risk to other coastal users by enabling moorings to establish in appropriately located Mooring Areas.

The effects of the Mooring Areas on recreation is discussed in greater detail in Appendix F.

***Policy 6(2)(c) recognise that there are activities that have a functional need to be located in the coastal marine area, and provide for those activities in appropriate places;...***

There is a functional need for some craft to moor in the coastal marine area as they cannot be stored on land. Providing for moorings supports and enables recreational use of the coastal marine area. The plan change identifies appropriate locations for moorings and provides for moorings within these mooring areas as a permitted

---

<sup>15</sup> Appendix D

<sup>16</sup> Appendix F



activity. The appropriateness of the mooring areas for moorings is assessed in Appendix B to G.

There is also a functional need for commercial operators, for at least for part of the year to moor near the Able Tasman National Park. The proposed plan change (and bylaw) provide for these operators by restricting the allocation of mooring space within Kaiteriteri Mooring Area 2 to commercial operators, subject to conditions.

Kaiteriteri is a high use area, especially in summer. There is a functional need to provide for boat launching and public mooring in this Bay. This need is met through provisions which restrict allocation of space within Kaiteriteri Mooring Area 1 to public moorings (Note: Public mooring is currently provided for in this mooring area by the Kaiteriteri Recreation Reserve Board who hold resource consent for this activity). Other functional uses within the Bay are controlled through separate legislation (e.g. the ski lane and swimming area). The proposed changes are consistent<sup>17</sup> with these other resource management documents.

Westhaven is a safe haven for boats at times of bad weather and as a launching site for search and rescue events. The functional need for boats to shelter in the inlet is acknowledged and as a consequence limited provision has been made in the plan change for mooring at Mangarakau.

Existing Policy 21.6.3.2 has also been amended to better reflect the NZCPS and now requires consideration of the functional need for occupation, when considering requests for private occupation within the CMA.

**Policy 6 (2)(e)** *promote the efficient use of occupied space, including by:*

- (i) *requiring that structures be made available for public or multiple use wherever reasonable and practicable;*
- (ii) *requiring the removal of any abandoned or redundant structure that has no heritage, amenity or reuse value;*
- (iii) *consider whether consent conditions should be applied to ensure that space occupied for an activity is used for that purpose effectively and without unreasonable delay.*

Policy 6 (2)(e)(i) - The proposed plan change and Bylaw, introduces a new framework of mooring areas which enables easy and flexible management of moorings within the mooring areas. Mooring is a permitted activity within the mooring areas, subject to the mooring owner holding a mooring license. The proposed framework enables moorings to be shifted to accommodate more or less boats as demand changes and enables more efficient mooring systems to be adopted, if needed. The proposed plan change and Bylaw promotes public use of coastal space by using provisions which give preference to public moorings over individual ownership<sup>18</sup>, where no pre-existing lawful mooring owner exists for a site. Policy 20.1.3.3 seeks to avoid the establishment of activities within the mooring area where

---

<sup>17</sup> Section 2.2 of this report

<sup>18</sup> Rule 25.1.2.1.(d) and Section 5 of the proposed Bylaw

those activities will affect the use of the mooring area. The Bylaw provides for the transfer of licences<sup>19</sup> when the licence is no longer required and a wait list<sup>20</sup> where demand exceeds capacity. It is anticipated that the new framework will enable more efficient use of the mooring areas.

The proposed plan change also seeks to minimise the space occupied by moored and anchored craft through a series of new policies. Policy 20.1.3.# of the plan change provides for the mooring areas. Policy 20.1.3.# (b) seeks to minimise the space occupied by moored and anchored craft by encouraging the establishment and use of public moorings in appropriate places. Policy 20.1.3.#(d) requires the use of space efficient mooring systems where practicable and appropriate. Finally Policy 21.6.3.# seeks to enable Mooring Area and public and multi-use structures to establish in appropriate locations, where the structures will enhance public access to and along the coastal marine area.

**Policy 6 (2)(e)(ii)-** The marine environment is a harsh environment and if coastal structures are not regularly maintained then the structures often deteriorates and lose their amenity value amenity e.g. wharfs. Rule 25.1.2.1(e) clarifies that structure owners can repair and maintain consented structures as a permitted activity, subject to conditions. This new rule should help prevent structures from deteriorating to the point that the structure becomes abandoned.

Where a structure is unauthorised or becomes abandoned, obsolete or redundant, and is adversely effecting environmental values, then policies 20.1.3.#.c, 21.1.3.5, 21.2.3.6, 21.3.3.2, 21.6.3.# require the removal of the structure except where the removal would have adverse effects on the environment or where has heritage or cultural values. The proposed plan change introduces two new rules to give effect to these policies. The first rule (25.1.5.7) allows for the removal of coastal structures as a permitted activity, subject to conditions. The second rule (25.1.2.1(f)) requires the owners of structures to provide Council with a name and contact details. These new provisions will help Council identify the owners of structures and enable the removal of any abandoned or redundant structures. Existing rule 25.1.2.3 (6) includes “circumstances where removal of the structure will be required” as a matter to be considered in imposing conditions on discretionary consents.

Policy 6(2)(e)(iii) -The provisions in the TRMP which give effect to Policy 6(2)(e)(iii) of the RMA are not changed by the proposed plan change. However, the Bylaw (Section 4.4.1.2), enables the Harbourmaster to cancel any mooring licence (within a Mooring Areas) if the mooring has not been established within a 12 month period.

It is considered that the proposed plan change (including through the supporting Bylaw) gives effect to the Objective 6 and Policy 6 of the NZCPS

#### **2.1.1.5 Objective 7**

*To ensure that management of the coastal environment recognises and provides for NZ international obligations regarding the coastal environment, including the coastal marine area.*

---

<sup>19</sup> Section 4.3 of the Bylaw

<sup>20</sup> Section 5.1.4 of the bylaw

The proposed plan change does not interfere with New Zealand's international obligations. It is considered that the plan change gives effect to Objective 7 of the NZCPS.

#### **2.1.1.6 Policy 3 Precautionary approach**

*(1) Adopt a precautionary approach towards proposed activities whose effects on the coastal environment are uncertain, unknown, or little understood, but potentially significantly adverse...*

The potential effect of the moorings on the seabed are assessed in the reports continued in Appendix B, C and E. The boundaries of the proposed Mooring Areas were amended to be clear of any sensitive environments which could be adversely affected. The Mooring Areas are proposed for locations that have been used for mooring and anchoring for a number of decades/centuries. The impact of the moorings on the amenity, landscape and natural character of the sites are known and are considered to be negligible<sup>21</sup>.

The proposed rules regarding the removal of coastal structures include conditions limiting the environmental effects of the activity. Any adverse effects arising from this activity are expected to be minimal and transient.

The public structures included in Schedule 25A as permitted activities, were established some time ago and the effects from those structures have already occurred. No further effects are expected to arise.

A precautionary approach is not considered necessary for the changes proposed in this plan change and as such it is considered that the proposed plan change gives effect to Policy 3 of the NZCPS.

#### **2.1.1.7 Policy 4 Integration**

*Provide for the integrated management of natural and physical resources in the coastal environment, and activities that affect the coastal environment. This requires:*

- ...
- (b) working collaboratively with other bodies and agencies with responsibilities and functions relevant to resource management, such as where land or waters are held or managed for conservation purposes; and*
  - (c) particular consideration of situations where:...*
    - (ii) public use and enjoyment of public space in the coastal environment is affected, or is likely to be affected; or...*
    - (v) significant adverse cumulative effects are occurring, or can be anticipated.*

Consultation and collaboration has been undertaken with the Department of Conservation and the Ministry of Primary Industries with regard to navigation and

---

<sup>21</sup> Appendix G

safety.<sup>22</sup> Iwi have also been consulted and their concerns considered<sup>23</sup> and addressed in part through the proposed plan change.

In the preparation of this plan change consideration has been given to other planning documents which are relevant to this plan change. These documents are discussed in greater detail in Section 2.2 below. The proposed plan change is considered to be consistent with these documents.

It is considered the proposed plan change gives effect to Policy 4 of the NZCPS.

### **2.1.1.8 Policy 5 Land or waters managed or held under other Acts**

- (1) Consider effects on land or waters in the coastal environment held or managed under:*  
*The Conservation Act 1987 and any Act listed in the 1<sup>st</sup> Schedule to that Act; or*  
*(a) Other Acts for conservation or protection purposes: and having regard to the purpose for which the land or waters are held or managed:*  
*(b) Avoid adverse effects of activities that are significant in relation to those purposes; and*  
*(c) Otherwise avoid, remedy or mitigate adverse effects of activities in relation to those purposes.*

The Westhaven (Te Tai Tapu) Marine Reserve, Westhaven (Whanganui Inlet) Wildlife Management Reserve, Farewell Spit Bird Sanctuary, Able Tasman Foreshore Scenic Reserve, Able Tasman National Park, and Tonga Island Marine Reserve are either located within or adjoin the coastal marine area affected by the proposed plan change. The proposed plan change does not significantly affect the above areas held or managed under the Marine Reserve Act 1971, National Parks Act 1980 and the Reserves Act 1977, with exception of the Abel Tasman Foreshore Scenic Reserve. The effect of the proposed plan changes on these areas is discussed in detail in section 2.2 of this Section 32 report.

The proposed plan change is not considered to effect or adversely affect the purposes for which the areas are held or managed. It is considered that the plan change gives effect to Policy 5 of the NZCPS.

### **2.1.1.9 Policy 7 Strategic Planning**

- (1) In preparing regional policy statements, and plans:*  
*(a) Consider where, how and when to provide for future...other activities in the coastal environment at a regional...level, and:*  
*(b) Identify areas of the coastal environment where particular activities and forms of ... use and development:*  
*(i) Are inappropriate; and*

---

<sup>22</sup> 2.1.2 and 3.2 of this Section 32 Report

<sup>23</sup> Section 5.4 of this Section 32 Report

*(ii) May be inappropriate without the consideration of effects through a resource consent application...or Schedule 1 of the Act process;  
And provide protection from inappropriate ... use and development in these areas through objectives, policies and rules.*

This is a high level policy which will be fully given effect to through the regional policy statement review (commenced) and the subsequent regional coastal plan review in 2021. In the interim, the proposed plan change strategically identifies 12 areas that are appropriate for mooring. The sites were initially selected based on location (spread) and all sites were sites of existing use. The sites were further assessed for effects on heritage, recreational use and demand, effects on birds and the environment, and visual effects on landscape and natural character.

As a result of the further investigations two sites were removed. One site was removed because the activity was not provided for in the wildlife management reserve, the other because of incompatibilities between ecological effects and navigation and safety matters.

The proposed plan change has also identified several pre-existing public use structures adjoining the Able Tasman National Park. Following an assessment of effects these structures are considered appropriate at their location and are proposed to be provided for as permitted activities in the plan change.

It is considered that within the scope of the plan change the plan change gives effect to Policy 7 of the NZCPS.

#### **2.1.1.10 Policy 12 Harmful aquatic organisms**

- (1) Provide in... plans, as far as practicable, for the control of activities in or near the coastal environments by causing harmful aquatic organisms to be released or otherwise spread, and include conditions in resource consents, where relevant, to assist with managing the risk of such effects occurring.*
- (2) Recognise that activities relevant to (1) include:*
  - (a) The introduction of structures likely to be contaminated with harmful aquatic organisms;*
  - (b) The discharge or disposal of organic material from ...vessels and structures, whether during maintenance, cleaning or otherwise; and whether in the coastal marine area or on land;*
  - (c) The provisions and ongoing maintenance of moorings, ... jetties and wharves; and ...*

The plan change introduces a new matter for consideration in the Rule 25.1.2.3 (#) Discretionary Activity (Structures Relating to Craft) which is “Any declaration, small scale management plan, or regional pest management plan under the Biosecurity Act 1993”.

The plan change also amends Rule 25.1.2.1 (Permitted Activities (Structures Relating to Craft)) to require “the structure is maintained free of any biosecurity risk

organism that is the subject of any declaration, small scale management plan, or regional pest management plan under the Biosecurity Act 1993.”

Mooring Licences issued under the Bylaw, will also require regular inspections (e.g. 2 yearly) and it is anticipated that any fouling on the moorings will be cleared at this time.

It is considered that the proposed plan change gives effect to Policy 12 of the NZCPS.

### **2.1.1.11 Policy 17 Historic Heritage identification and protection**

*Protect historic heritage in the coastal environment from inappropriate ... use and development by:*

*(c) Identification, assessment and recording of historic heritage, including archaeological sites.*

The proposed Mooring Areas adjoin archaeological sites and heritage areas. An assessment of the effects of the proposed Mooring Areas on historic heritage has been undertaken. The assessment report <sup>24</sup> found that the proposed Mooring Areas were generally in keeping with the adjoining historic wharf areas and the moorings were unlikely to affect any archaeological sites within the proposed Mooring Areas.

The changes proposed to Rule 25.1.2.1- Permitted Activities (Structures Relating to Craft) clarify that the maintenance and repair of structures is permitted, on the condition that the materials used are similar or same as previously used for the structure. While this rule does not require conservation of heritage structures, it does enable maintenance and repair to occur which is a significant improvement on the existing rules.

Rule 25.1.5.7 provides for the removal of coastal structures as a permitted activity, subject to conditions. Condition (f) excludes the removal of any structure listed on the New Zealand Heritage List (in accordance with the Heritage New Zealand Pouhere Taonga Act 2014) or listed in the Schedule 16.13 of the TRMP.

Under the Heritage New Zealand Pouhere Taonga Act 2014, the disturbance of archaeological sites requires an archaeological authority, which is a process separate to the RMA.

Initially the proposed plan change provided an exception only for Heritage New Zealand Listed structures, however, following the recommendations in the assessment report, the policies and rules were broadened to cover heritage and cultural values as well. It was also identified in the report that a broader review of the historic heritage provisions was required to fully give effect to the NZCPS. A full review of the heritage provisions is beyond the scope of this plan change and will be

---

<sup>24</sup> Appendix D

undertaken as part of the regional policy statement and regional coastal plan review, in the next few years.

It is considered that the proposed plan change gives effect to Policy 17 of the NZCPS.

### **2.1.1.12 Policy 22 and Policy 23**

#### **Policy 22 Sedimentation**

*(1) Require that ...use, or development will not result in a significant increase in sedimentation in the coastal marine area, or coastal water.*

#### **Policy 23 Discharge of contaminants**

*(1) In managing discharges to water in the coastal environment, have particular regard to:*

*(b) The nature of the contaminants to be discharged, the particular concentration of contaminants needed to achieve the required water quality in the receiving environments, and the risks if that concentration of contaminants is exceeded; and*

*(a) The capacity of the receiving environment to assimilate the contaminants and;*

*(b) Avoid significant adverse effects on ecosystems and habitats after reasonable mixing;*

*(c) Use the smallest mixing zone necessary to achieve the required water quality in the receiving environments; and*

*(d) Minimise the adverse effects on the life-supporting capacity of water within a mixing zone.*

The plan change introduces a new rule providing for the removal of coastal structures<sup>25</sup>. The plan change also includes a new rule<sup>26</sup> which provides for discharges arising from the removal of coastal structures as a permitted activity, subject to conditions.

The conditions require that none of the following effects are likely to arise in the receiving waters, after reasonable mixing

*(i) The production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;*

*(ii) Any conspicuous change in the colour or visual clarity of the receiving water 12 hours following the removal of the structure;*

*Note: A change in colour or clarity of more than 10 percent is generally discernible by observation. A change of 20 percent can be considered a conspicuous change and is easily visible.*

*(iii) Any emission of objectionable odour;*

*(iv) Any discernible change to any habitat by deposition of sediment onto the coastal marine area; or any significant adverse effects on aquatic life or bird life.*

---

<sup>25</sup> Rule 25.1.5.7

<sup>26</sup> Rule 36.2.2.#

The conditions for both proposed rules place restrictions on the environmental effects arising from the activity and discharge. As the structures are pre-existing and entirely within the coastal marine area it is not anticipated that any additional sediment will be added to the coastal marine area.

It is considered that the proposed plan change gives effect to Policy 22 and 23 of the NZCPS.

Overall, it is considered that the proposed plan change has been prepared in accordance with and gives effect to the NZCPS as required by Section 66(ea) & 67(3) of the RMA.



## **2.1.2 The Crown's Interests in the Coastal Marine Area**

The Crown retains an interest in the coastal marine area and any changes to the regional coastal plan are undertaken in partnership with the Minister of Conservation. The Minister of Conservation, through the Department of Conservation has been consulted throughout the drafting of the plan change. In partnership with the Department the plan change includes changes which facilitate the management of structures within the Abel Tasman Scenic Foreshore Reserve and support policies within the Abel Tasman Scenic Foreshore Management Plan. The plan change includes provisions which help establish ownership for coastal structures, a requirement under the Marine and Coastal Area (Takutai Moana) Act 2011. Finally, the plan change includes provisions which directly support the Minister's interest in the coastal marine area e.g. biosecurity, and the plan change includes provisions which give effect to the NZCPS.

The Minister of Transport (through Maritime New Zealand) have seen a draft of the Bylaw regarding the matters of navigation and safety under the Transport Act. Maritime New Zealand suggested some amendments to the Bylaw, but by and large they support the Bylaw. The proposed plan change provides for the Minister of Transport's interests in the coastal marine area by providing safe and appropriately located and managed moorings.

Council has consulted with Heritage New Zealand regarding the potential impacts of the Mooring Areas on archaeological sites. Heritage New Zealand has raised no concerns.

## ***2.2 Management Plans and Strategies Prepared Under other Acts.***

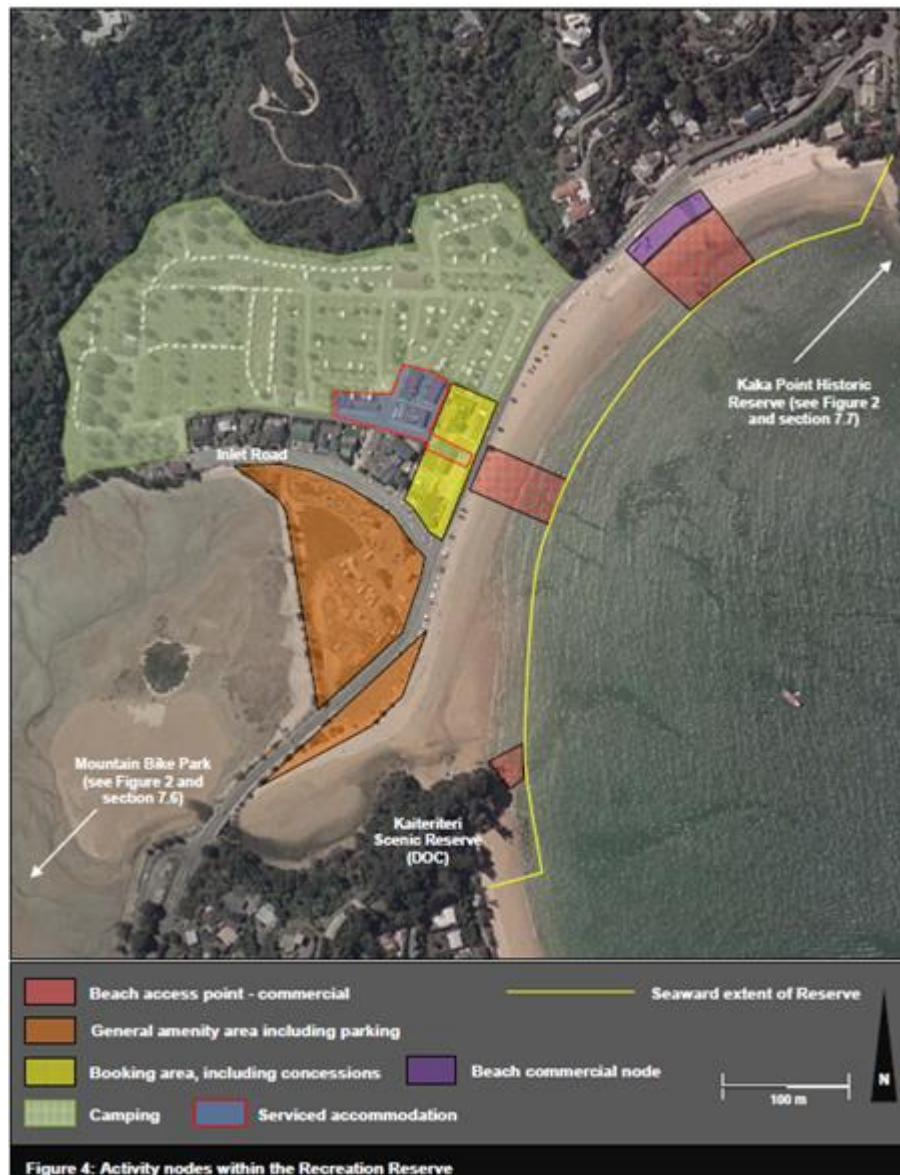
Under Section 66(2)(c) of the RMA Council is required to have regard to management plans and strategies prepared under other Acts. This broad evaluation against other resource management policy documents ensures that plan changes are not developed in isolation. This evaluation also offers an opportunity to identify, and where appropriate, support other planning documents through the regulatory tools of the RMA plan.

A number of relevant documents prepared under other Acts have been identified and are assessed below.

### **2.2.1 Kaiteriteri Recreation Reserve and Kaka Point Historic Reserve Management Plan (2015)**

The Kaiteriteri foreshore and beachfront is predominantly managed by the Kaiteriteri Reserve Board (KRB) under *Kaiteriteri Recreation Reserve and Kaka Point Historic Reserve Management Plan (2015)* (see Map 1 below). The area subject to the

management plan adjoins and includes part of the coastal marine area. This is a high use area and integrated management with the adjoining coastal marine area is important.



Map 1 Kaiteriteri Recreation Reserve and Kaka Point Historic Reserve Management Plan (2015) area.

The objectives of the management plan are:

- 1) *Protection of the opportunity for visitors and residents to enjoy a range of compatible recreation activities within a spectacular coastal setting.*
- 2) *Protection and management of the... and the natural character of the coastal environment...*
- 4) *Management, protection and interpretation of the historical, cultural and archaeological values of the Reserves.*

- 6) *Maintenance of the functioning of natural ecosystems and indigenous species of flora and fauna without diminishing the recreation potential of the Reserves.*
- 8) *Integrated management and use of the Reserves with that of adjacent waters and lands administered by the Tasman District Council and the Department of Conservation...*

The KRB historically owned and managed all the moorings in the Bay. In recent years the deeper water moorings have been sold, with 15 inner shore moorings and the swim platform remaining in KRB ownership. While technically outside of the management plan area, the management plan contains policy regarding moorings in the Bay. The policy is as follows:

#### **7.5.1 Expectations**

- 1) *The location and maintenance of moorings will comply with TDC consent conditions.*
- 2) *The moorings will assist concessionaires and Reserve users in their operations and activities within and around the Reserves.*
- 3) *Use of the moorings for commercial activities will not adversely affect the social, cultural or natural qualities of the Reserves and Kaiteriteri Bay.*

#### **7.5.2 Policies**

- 1) *To disallow any commercial activity aboard a vessel while that vessel is moored, including, for example, on-water accommodation and retail activities.*
- 2) *To prioritise the allocation of moorings to agencies which hold concessions for activities within the Reserves.*
- 3) *Temporary moorings will be allocated to Reserve users on the same basis as camping sites.*
- 4) *For the Board to retain the discretion to cancel a mooring lease if it is on-sold or sub-let or if the lease-holder's type of activity changes.*

#### **7.5.3 Methods**

- 1) *The CEO will contact the Tasman District Council Harbourmaster annually to check on the compliance by mooring holders with the TDC Navigation Safety bylaw.*
- 2) *Mooring lease agreements will be structured to reflect Board policy.*
- 3) *Standard camping booking systems.*

An assessment of the effects of the plan change on the *Kaiteriteri Recreation Reserve and Kaka Point Historic Reserve Management Plan (2015)* has been undertaken.

*Objective 1) Protection of the opportunity for visitors and residents to enjoy a range of compatible recreation activities within a spectacular coastal setting.*

An assessment of the effects of the proposed mooring areas can be found in Appendix F. It is considered that the plan change will support opportunities for visitors and residents to enjoy a range of compatible recreation activities by providing two Mooring Areas which will enable commercial operators and members of the public to access the coastal marine area. The Mooring Areas have been located away from other recreational uses of the area, including swimmers and walkers.

*Objective 2) Protection and management of the... and the natural character of the coastal environment...*

An assessment of the visual, natural character and landscape effects of the proposed mooring areas was undertaken. The assessment found the effects to be negligible<sup>27</sup>.

*Objective 4) Management, protection and interpretation of the historical, cultural and archaeological values of the Reserves.*

An assessment of the impacts of the plan change on historic heritage has been undertaken. Overall it was not anticipated that the plan change would have an effects on the heritage value of the area.<sup>28</sup>

*Objective 6) Maintenance of the functioning of natural ecosystems and indigenous species of flora and fauna without diminishing the recreation potential of the Reserves.*

An assessment of the effects of the plan change on the biological features and habitats of the areas has been undertaken. No modifications to the Kaiteriteri Mooring Areas was recommended<sup>29</sup>. The proposed Mooring Areas, will enhance recreational enjoyment without affecting the functioning of natural ecosystems.

*Objective 8) Integrated management and use of the Reserves with that of adjacent waters and lands administered by the Tasman District Council and the Department of Conservation...*

The KRB representatives have been involved in the discussions regarding the proposed Mooring Areas in Kaiteriteri. The management plan has been considered in the drafting of the plan change and the plan change supports and gives effect to the objectives and policies in the management plan.

With regard to the KRB's mooring policy (see 7.5.1 *Expectations*, 7.5.2 *Policies and 7.5.3 Methods* above) it is considered that the Mooring Areas will assist concessionaires and reserve users in their operations and activities within and around the reserves. Kaiteriteri Mooring Area 2 will be restricted to commercial operators and the two current non-commercial moorings within the Mooring Area will over time be transferred (sold) to commercial operator. The existing moorings in the proposed Kaiteriteri Mooring Area 1 will continue to be available to camp/ reserve

---

<sup>27</sup> Appendix G, pg 31

<sup>28</sup> Appendix D

<sup>29</sup> Appendix B

users, in accordance with the policy for the duration of the resource consent held for them. After that time the moorings will be only available for public use. As a condition of mooring<sup>30</sup> mooring owners cannot use their boat for long term accommodation or undertake on board commercial operations, while moored on a mooring.

Regard has been given to the management plan and the plan change is considered consistent and gives effect to the relevant management objectives.

### **2.2.1 Abel Tasman Foreshore Scenic Reserve Management Plan (2012)**

The Abel Tasman Foreshore Scenic Reserve comprises 774ha of land which lies between the Mean High Water Mark and Mean Low Water Springs along the Abel Tasman National Park coastline. The Boundary and Glasgow & Torrent Bay Mooring Areas adjoin the Able Tasman Foreshore Scenic Reserve.

A management plan has been prepared for the scenic foreshore reserve under the Reserves Act 1977. The management plan implements the Nelson Marlborough Conservation Management Strategy and provides for the management of the Abel Tasman Foreshore Scenic Reserve in accordance with the Reserves Act 1977, the Conservation Act 1987 and the Conservation General Policy 2005.

The general focus of the management plan is to continue allowing public and adjoining landholders use and enjoyment of the area, while maintaining the experience and controlling the effects. The following provisions are considered to be relevant to this plan change.

*9.1.10 Moorings and other structures.- the management plan considers that moorings adjoining private land and settlements is appropriate, but elsewhere moorings can detract from the scenic values of the reserve. The management plan suggests that other than provided for by Council no new moorings or structures should be located adjoining the reserve, particularly in front of the National Park. The management plan contains the following policy.*

*9.1 Policy 17- New Moorings adjacent to the reserve should not be allowed (other than in accordance with policy 21.2.3.18 of the Tasman Resource Management Plan). Note: Policy 21.2.3.18 is proposed to be amended by the plan change.*

*[Policy 21.2.3.18 of the Tasman Resource Management Plan is as follows. To limit the number, location, and scale of structures in the coastal marine area adjoining the Abel Tasman National Park in accordance with the following:...*

- (c) a water pipe at Bark Bay;*
- (d) a jetty for public use at Torrent Bay/Rākauroa;*
- (e) swing moorings will be allowed only in association with an interest in a land title at Boundary Bay, Torrent Bay/Rākauroa, or Astrolabe Roadstead,*

---

<sup>30</sup> 25.1.2.1.d

*and only to the extent that the cumulative effect of moorings at each location is not adverse;] ...*

*11.6 Facilities and Structures (Foreshore Adjacent to Private Land)- the management plan acknowledges the presence of a number of unauthorised facilities and structures at Torrent Bay/Rakauroa and states that in conjunction with the TDC, those structures that comply with the relevant provisions of the Plan should be legalised, including the granting of concessions. Any remaining unauthorised structures on the reserve should be removed. The management plan contains the following policies.*

*11.6 Policy- To limit the number of private facilities and structures in the reserve to those provided for by the Tasman Resource Management Plan.*

#### *11.6 Methods*

*1. Ensure that the existing jetties, mooring post and boat cradles at Torrent Bay/Rakauroa, and other mooring lines and buoys within the reserve, are legalised by 30 June 2014, in terms of both the Tasman Resource Management Plan and this plan, and remove those that do not comply. ...*

*3. The exclusive private use of a new mooring should not be allowed.*

The plan change proposes two Mooring Areas seaward of the foreshore reserve. The areas proposed largely contain existing authorised moorings which belonging to adjoining residents, as required by the Plan. It is anticipated that potentially one more mooring may be established in Glasgows/Torrent Bay and that no new moorings will be established in Boundary Bay<sup>31</sup>. If new moorings are established they will be clustered with the other moorings.

The potential establishment of one additional mooring in Glasgow/Torrent Bay appears contrary to the intent of the management plan to restrict further structures. However, the management plan does anticipate continuing demand for additional structures and defers to the provisions in the Tasman Resource Management Plan (e.g. policy 21.2.3.18) to control the establishment of structures beyond the reserve. The provisions proposed in the plan change continue to limit the occupation of the moorings to adjoining landowners.

---

<sup>31</sup> Appendix F

MAP 5 Unformed legal road, reserve land and unalienated Crown land, Torrent Bay/Rakauroa, Boundary Bay, Frenchman Bay/Potikitawa and Sandfly Bay



Map 2: Torrent/Boundary Bay.

Source: <https://www.doc.govt.nz/globalassets/documents/about-doc/role/policies-and-plans/abel-tasman-foreshore-management-plan/map-5.pdf>

A review of unauthorised structures within the foreshore reserve has been undertaken (11.6 of the management plan). In consultation with the Department of Conservation, a number of “public use” structures (jetties, steps, track markers, causeways etc.) were identified and the plan change proposes to “legalise” them as permitted activities<sup>32</sup>. All other structures will require resource consent for continued occupation, or be removed. The proposed plan change further gives effect to the management plan by making it easier for coastal structures no longer wanted to be removed as a permitted activity.

The plan change proposes to include the Torrent Bay/Rakauroa finger jetty as a permitted activity<sup>33</sup>. This jetty is a privately owned and managed by adjoining landowners. The structure does not have exclusive use rights and is available for

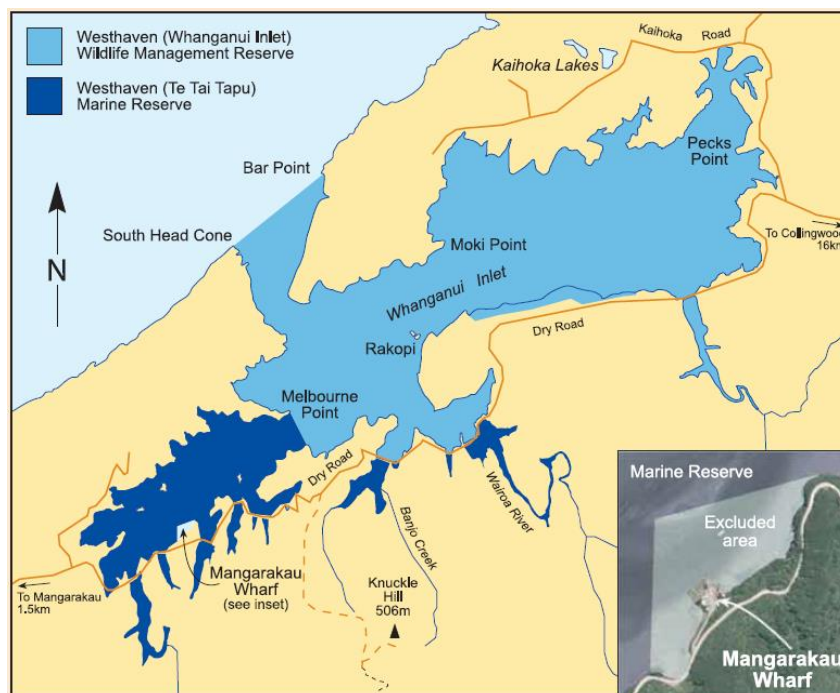
<sup>32</sup> Appendix A: Schedule 25A

<sup>33</sup> Appendix A: Schedule 25A

public use. 11.6 Policy seeks to “limit the number of private facilities and structures in the reserve to those provided for by the Tasman Resource Management Plan”. It is acknowledged that the structure is a “private structure”, however it has been in existence for a long time, is used by multiple adjoining landowners and the public are free to use it. For those reasons the Torrent Bay/Rakauroa finger jetty has been provided for as a permitted activity through the plan change. The plan change does not encourage or provide for any other private structures on the foreshore reserve.

Regard has been given to the management plan and the plan change is considered to be consistent and gives effect to the relevant management objectives.

## 2.2.2 The Westhaven Marine Reserve and Wildlife Management Reserve.



Map 3: Whanganui Inlet.

Source: <https://www.doc.govt.nz/parks-and-recreation/places-to-go/nelson-tasman/places/westhaven-whanganui-inlet-area/map-and-boundaries/>

The Westhaven (Te Tai Tapu) Marine Reserve covers 536 ha and includes all the tidal sand flats and channels south of a straight line between Pah Point and the closest headland of Kahurangi National Park on the opposite shore. The area around Manarakau wharf is not included in either of the reserves. The reserve protects all plants and animal life within its boundaries.

Westhaven (Whanganui Inlet) Wildlife Management Reserve stretches over 2112 h. It covers all tidal sand flats and channels not included in the marine reserve or Mangarakau Wharf area. It protects the wildlife within its boundaries and the habitats and vegetation on which they depend. The wildlife management reserve allows for fishing and gamebird hunting.



The proposed Mooring Area at Mangarakau (Wharf) adjoins the Westhaven (Te Tai Tapu) Marine Reserve. An additional Mooring Area was originally proposed for Pah Point which was located within the Westhaven (Whanganui Inlet) Wildlife Management Reserve. The proposed Pah Point Mooring Area was not pursued beyond the draft stage as the establishment of moorings within the reserve was not permitted under the Marine Reserves Act 1971.

The Mangarakau Mooring Area boundaries were amended during the drafting of the plan change to exclude the more sensitive intertidal area, following an assessment of environmental effects<sup>34</sup>. The proposed Mooring Area is not recognised as an important area for birds, however it does form part of the greater estuarine area used by birds. The proposed Mooring Area historically and currently is used for two all tide moorings.

The proposed plan change provides for the removal of abandoned coastal structures as a permitted activity. If the Mangarakau wharf was removed then the seabed disturbance could be significant and affect the marine reserve. However, the permitted activity rule<sup>35</sup> precludes significant adverse effects on aquatic or bird life. If the marine reserve were to be significantly affected then a resource consent would be required. There are few other structures within Westhaven that might be removed under these rules.

Overall, the plan change is not thought to affect the land or waters of either the reserve or management area.

### **2.2.3 Farewell Spit Bird Nature Reserve**

Farewell Spit is frequented by over 90 bird species with the Spit providing a variety of habitats from salt marsh, open mudflats, fresh water and brackish lakes, ocean salt beaches and vegetated and bare sand dunes. The plan change is unlikely to affect the nature reserve, except where coastal structures are removed from the coastal marine area. The provisions<sup>36</sup> proposed in the plan change require resource consent where there is expected to be significant adverse effects on aquatic or birdlife, and permission from the Department of Conservation is also likely to be required as landowner. The plan change is not considered to be contrary to the objectives of the reserve.

### **2.2.4 Abel Tasman National Park**

The coastal boundary of 23,000 ha Abel Tasman National Park ends at the Mean High Water Mark and the national park is not directly affected by the proposed plan change. However, the management plan does contain policy regarding the integrated management of the Abel Tasman coastal environment. The issues/policies and methods are as follows:

#### *6.1.4 Coastal waters*

---

<sup>34</sup> Appendix B

<sup>35</sup> 25.1.5.7 & 36.2.2

<sup>36</sup> 25.1.5.7 & 36.2.2

*Coastal waters adjacent to the park are under the jurisdiction of Tasman District Council. The Department should advocate for appropriate controls and rules in Council plans to ensure that management of the adjacent coastal waters is complementary to the management approach for the park. Particularly in relation to the minimisation of mechanical and electronic noise, boat wakes, pollution, commercial and non-commercial activities (see also sections 5.1.2.10 'Advocacy' and 6.2.3 'Adjacent coastal waters').*

#### *6.1.7 Policy*

*1. To establish and maintain a constructive relationship with commercial operators, local communities, neighbours, Tasman District Council and associates, to preserve the natural, cultural and heritage values of the park and enhance opportunities for these groups to be involved in park management.*

#### *6.18 Implementation*

*3. Seek provisions in the Tasman Resource Management Plan to protect natural quiet, water quality and quantity, and other natural and amenity values within the park and adjacent coastal area.*

#### *6.2.3 Adjacent coastal waters*

*The Coast is an important focus for activities within and adjacent to the park, and activities on the water form an important part of the visitor experience. Commercial water-based activities within the Abel Tasman Foreshore Scenic Reserve will be jointly managed by the Department and Tasman District Council. This includes controls on the use of commercial vessels that complement visitor and recreation concession management in the park.*

*Commercial water-based activities outside of the Abel Tasman Foreshore Scenic Reserve and all recreational water-based activities in the coastal waters are the responsibility of Tasman District Council and Maritime New Zealand. Tasman District Council manages these activities through their Navigation Safety Bylaws and the provisions of the Tasman Resource Management Plan. The main water-based issues relate to potential conflicts between water skiers, swimmers, kayakers, fishers, personal watercraft and other motorised vessels and other water users; and the noise, wash and pollution resulting from some water-based activities. Water safety and biosecurity are also issues, due to the large number and variety of vessels using the area.*

*Integration of the administration of the coastal waters with that of the park and Abel Tasman Foreshore Scenic Reserve will improve management along the Coast. The Department should work with Tasman District Council to manage activities on the foreshore and coastal waters where activities may adversely affect national park values and land-based activities.*

#### *6.2.7 Moorings, jetties and boat ramps*

*Moorings are administered by Tasman District Council and exist at several points along the Abel Tasman Coast, mostly adjoining private land and settlements, which is appropriate. Elsewhere, they can detract from the scenic values of the park and the Department should oppose applications for moorings on parts of the coast directly adjoining the park.*

*Jetties and boat ramps are within the Abel Tasman Foreshore Scenic Reserve and are administered by Tasman District Council and the Department under the Reserves Act 1977, as well as the Council's responsibilities under the Resource Management Act 1991. Therefore, a concession, as well as a resource consent, will be required for any private structure within the reserve. There are no jetties along the coast directly adjoining the park, but there are several adjoining the private lands and settlements. The only boat ramp adjoining the park is at Totaranui and is maintained by the Department. Although road access for boat launching is limited to Totaranui and Awaroa, pressure exists at various places to allow boat ramps and jetties so that visitors can haul boats from the water, at least overnight. Such structures can interfere with coastal processes and can be a major intrusion on the natural character of the Coast. For these reasons, a concession should not be granted for any new structures within the Abel Tasman Foreshore Scenic Reserve where it directly adjoins the park.*

*Moorings, jetties and ramps within the Abel Tasman Foreshore Scenic Reserve adjoining private land and settlements are appropriate in certain circumstances. However, any application for a concession should be considered on a case-by-case basis, taking into account the potential adverse effects of the structures on the coastal environment and the natural character of the neighbouring national park.*

#### *6.2.8 Policy*

*1. To work with adjacent communities, Tasman District Council and other stakeholders to manage the park, the foreshore and coastal waters adjacent to the park in an integrated manner.*

#### *6.2.9 Implementation*

*5. Work with Tasman District Council to manage activities on the Abel Tasman Foreshore Scenic Reserve, adjacent private land and coastal waters which may adversely affect national park values and land-based activities.*

*7. Advocate to Tasman District Council for active enforcement of all maritime regulations.*

*8. Advocate to Tasman District Council to prohibit further waterbased commercial operations on coastal waters adjacent to the park that are likely to adversely affect park values.*

*9. Work with Tasman District Council to achieve integrated management of activities on the Abel Tasman Foreshore Scenic Reserve and coastal waters adjacent to the park.*

*10. Work with Tasman District Council to prevent the construction of further structures such as boat ramps and jetties along the coast directly adjoining the park.*

#### *6.2.10 Outcomes*

*1. There is integrated management of the park and adjacent foreshore and coastal waters.*

*2. Activities on adjacent lands and waters do not compromise park values.*

Council has worked closely with the Department of Conservation in preparing this plan change. Part of that work involved identifying appropriate structures within and adjoining the foreshore reserve for legalisation through Schedule 25B of the Plan. Council has also been in regular contact with a representatives from the community who own of the Torrent Bay finger jetty.

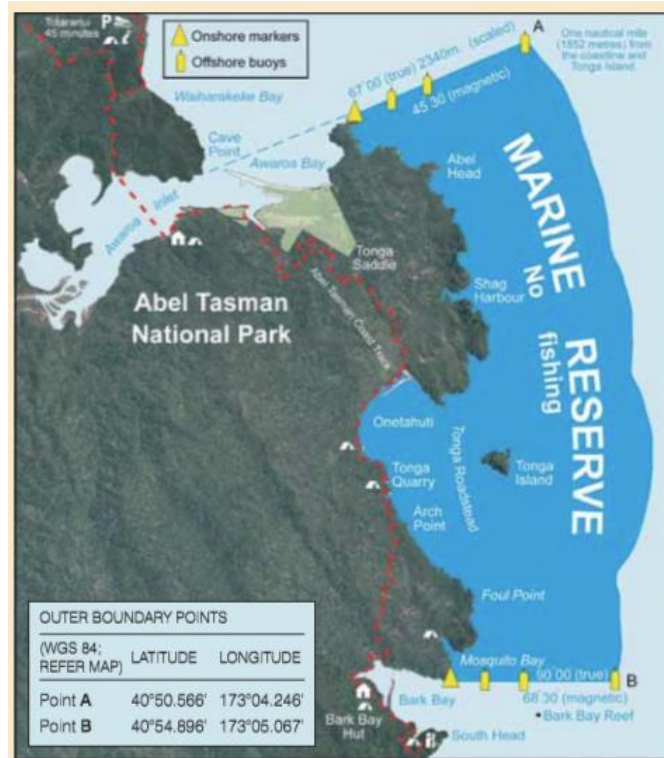
The plan change introduces new provisions for boats moored within the Mooring Area (once the existing consents lapse) which: excludes commercial activities on board boats moored within the Mooring Area and long term accommodation and; requires structures to be maintained free of organisms that are biosecurity risk. The proposed Mooring areas adjoins private land and the plan change continues to require mooring owners to have an interest in a land title in Torrent/Rakaura and Boundary Bay. These provisions are consistent with the management plan.

The plan change proposes to provide for two jetties in Torrent Bay 1) the council owned public jetty and 2) the privately owned finger jetty. The public jetty is adjacent to a Department of Conservation owned property, but not the Park itself. The public jetty was approved in 2011 following a resource consent process, it is presumed the Department of Conservation would have been involved in this process. The jetty is consented until 2043. The finger jetty is partially within the foreshore reserve and the management plan provides for jetties adjoining private land on a case by case basis. The jetty occurs in a settlement area and many other structures are visible in the area. The Department of Conservation have not raised concerns regarding the inclusion of this this jetty in Schedule 25A of the plan change.

It is considered the plan change is consistent with the management plan and integrates the management of the Abel Tasman coastal environment.

#### **2.2.5 Tonga Island Marine Reserve.**

Tonga Island reserve is located centrally along the Abel Tasman National Park (see below). All marine life within the boundaries is protected. No mooring areas are proposed for this area, however the marine reserve will be subject to the general coastal marine area provisions in the plan change. It is considered that the plan change will have little if any effect on the marine reserve's objectives.



Source: <https://www.doc.govt.nz/globalassets/documents/conservation/marine-and-coastal/marine-protected-areas/tonga-island-marine-reserve-web.pdf>

## 2.2.6 Tasman District Council Consolidated Bylaw

The Tasman District Council Consolidated Bylaw was made under the requirements of the Local Government Act 2002 and Maritime Transport Act 1994. The consolidated bylaw contains several chapters including Chapter 5: Navigation Safety Bylaw (2015) which is relevant to the plan change. Chapter 5 of the Bylaw contains the districts regulations for maritime navigation and safety. Chapter 5 of the Bylaw contains regulations around the use and maintenance of moorings and sets aside (reserves) areas for specific activities e.g. water skiing. There is nothing in the plan change considered contrary to the provisions of the Bylaw.

Note: The draft Bylaw associated with this plan change is intended to provide the mechanism for managing moorings within the Mooring Areas. The draft Bylaw will ultimately become a new chapter in the consolidated bylaw. The draft Bylaw will be considered and determined in conjunction with the plan change. The draft Bylaw is also considered consistent with the plan change.

## 2.3 Planning Document Recognised by an Iwi Authority.

The RMA makes specific provisions for iwi management plans. Under Section 66(2A)(a) of the RMA Council is required to "...take into account any relevant planning document recognised by an iwi authority and lodged with a local authority...". Council acknowledges and recognises the aspirations of Iwi through any management plans lodged with Council.

Two iwi management plans exist for the district but only one management plan is considered relevant for this plan change - Ngāti Tama ki Te Waipounamu Trust – Environmental Management Plan 2018 (EMP). The EMP provides high level statements to guide Crown and Local Authorities, applicants and communities on Ngāti Tama values and interests in the rohe and the management of Te Taiao natural resources and cultural heritage. The EMP applies to the following area.

## Ngāti Tama Te Tau Ihu Coastal Marine Area



**Map 4:** Source: <https://www.epa.govt.nz/assets/FileAPI/proposal/NSP000042/Evidence-Supplementary-evidence/Environmental-Management-Plan-2018-Ngati-Tama-ki-Te-Waipounamu-Trust.pdf>

The EMP covers a broad suite of matters, the following are considered to be directly relevant to the plan change.

### **15.5 Structures In The Coastal Marine Area**

#### **15.5.1 Aspirations**

*The significance of the coastal marine environment to Ngāti Tama is recognised and cultural heritage sites are protected*

- *the foreshore and seabed, coastal waters, mahinga kai and kaimoana are protected from developments which are incompatible with Ngāti Tama cultural values; and*
- *structures within the coastal environment are of sound construction and compatible with the natural character of the area.*

#### **15.5.2 Issues**

*Facilitating access to the coastal environment may include the development of coastal structures such as marinas, slipways, wharves, piers, boat ramps, jetties. However, structures can give rise to:*

- *a visual and physical obstruction for migratory manu;*
- *loss of habitat and adverse effects on indigenous species;*
- *damage or loss of wāhi tapu;*

- *loss of natural and landscape values;*
- *increased density of coastal structures in particular localities; and*
- *restrictions on the use of the area for other activities.*

### **15.5.3 Actions**

*a. Ngāti Tama identifies “no go” zones in the coastal marine area.*  
*b. Any structure or activity within or adjacent to the coastline will require consultation with Ngāti Tama.*

...

*d. Ngāti Tama maintains a close working relationship with Maritime New Zealand and the Harbourmaster and will actively engage in assessments of any developments involving new structures in the coastal marine environment.*

*e. Ngāti Tama adopts a precautionary approach towards any proposals involving new structures in the coastal marine environment.*

### **15.5.4 Indicators**

*√ number of coastal structures, which are compatible with Ngāti Tama cultural values; and*

*√ number of new structures, which are erected within existing Port Zones (such as Mapua, Motueka and Tarakohe).*

Council is not aware of any “no-go” zones identified at the time of drafting this Section 32 report. Ngati Tama have been consulted during the drafting of the plan change and have not raised any concerns regarding the sites proposed for mooring. The plan change is likely to cause additional moorings to establish in some of the Mooring Areas. These new moorings will occur as a permitted activity and as such Ngati Tama will not have the opportunity to engage in an assessment prior to establishment. However, Ngati Tama has and will continue to be provided, opportunity to engage through the plan process to raise concerns about additional structures occurring in the proposed Mooring Areas. While new structures (moorings) are likely to arise from the plan change they will all be located within existing areas, where the effects are minor, historical and well known. It is anticipated that over time the total number of structures in the coastal marine area should decline as well as enabling more efficient and environmentally sustainable (new) structures to be used. Three of the proposed Mooring Areas are located in and around the port areas of Motueka and Mapua.

## **15.6 Coastal Access**

### **15.6.1 Aspirations**

▪ *Ngāti Tama whānau maintain their traditional relationships with coastal sites and resources.*

### **15.6.2 Issues**

*Increased public pressure on coastal areas resulting in adverse effects on:*

- *culturally significant sites;*
- *the natural character of the landscape;*

- *the availability of resources; and*
- *the protection of sensitive and vulnerable areas or resources.*

*Increased public pressure to coastal areas resulting in:*

- *increased infrastructure pressure, such as the provision of public toilets and camping grounds;*
- *an increase in rubbish being dumped in sacred and sensitive areas;*
- *building activity for tourism development;*
- *increased risk of sewage discharge to the coastal marine environment; and*
- *loss of access to culturally significant sites in the coastal marine area.*

### **15.6.3 Actions**

*Ngāti Tama will:*

- Participate in planning processes relating to improved access to the coastal environment. This includes the development of structures to facilitate access such as public toilets, upgrading existing structures, waste disposal and discharge methods.*
- Work with statutory authorities and interest groups to raise awareness of the importance of the coastal environment to whānau.*
- Work with statutory authorities to identify areas where coastal development will take place, to ensure whānau have continued access to mahinga kai resources.*
- Require limits on coastal developments (which may include camping sites, reserves and parks) which Ngāti Tama considers to be under pressure or do not have the infrastructure to cope with increased pressures.*

Ngati Tama have not identified any issues with the plan change to date. It is noted that two Mooring Areas adjoin Kaka Point and Kaiteriteri Scenic Reserve, and the Mangarakau mooring area adjoins Westhaven Marine Reserve. Both areas are of special significance to Ngati Tama<sup>37</sup>. The effect of the plan change will be to increase the number of structures adjoining these special areas. However, the total number of structures that can be established in Westhaven is limited by the size of the Mooring Area and the provisions restricting activities in the reserves. The number of structures which can locate at Kaiteriteri is also limited by the size of the two Mooring Areas and provisions in the Plan<sup>38</sup>.

Assessments have been undertaken regarding the effects of the proposed Mooring Areas on the visual, landscape, natural character and indigenous biodiversity<sup>39</sup>. Amendments were made regarding the location of the Mooring Areas where effects were identified.

## **15.8 Commercial Surface Water Activities**

### **15.8.1 Aspirations**

---

<sup>37</sup> Ngati Tama ki Te Waipounamu Trust( 2018), Ngati Tama ki Te Waipounamu Trust – Environmental Management Plan 2018 pg 60

<sup>38</sup> 21.2.3.18

<sup>39</sup> Appendix B & G



*Ngāti Tama whānau are able to access healthy kai moana from coastal marine environments. Culturally sensitive coastal marine environments are protected from the adverse effects of commercial surface water activities (For example, traditional resource gathering areas such as Westhaven Inlet).*

### **15.8.2 Issues**

- noise pollution from motors, loudspeakers, and vessel horns;*
- discharge of sewage from boats and grey water containing contaminants;*
- risk of one-off coastal disasters such as oil spills, ballast discharges and accidental vessel groundings; and*
- potential for vessels to spread introduced pests when anchoring or mooring, particularly near offshore islands.*

### **15.8.3 Actions**

- a. Ngāti Tama works with the DOC to assess the nature and number of concession applications issued for commercial recreation and tourism operations.*
- b. Ngāti Tama stipulates conditions on concessions relating to surface water activities to ensure any potential adverse effects on cultural values are avoided.*
- c. Statutory authorities have accidental disaster prevention and clean up plans in place.*
- d. Ngāti Tama works with Port companies and statutory authorities to ensure that vessels coming from outside Ngāti Tama area of interest do not release contaminated ballast water into whānau food baskets.*
- e. Advocate for the removal of contaminated water from vessels to designated land based sewage and grey water discharge facilities.*
- f. Actively encourage operators to take advantage of new technologies to reduce the effects of commercial tourism on the coastal environment.*

The plan change provides for and enables the storage of commercial boats within the Kaiteriteri 2 Mooring Area. The commercial operation and concession conditions are managed through legislation and a management plan separate to this plan change. Commercial activities and accommodation on boats moored within the mooring areas are proposed to be discretionary activities under the plan change. The plan changes also proposes that moorings within the Mooring Area need to be “maintained free of any biosecurity risk organisms that is the subject of any declaration, small scale management plan, or regional pest management plan under the Biosecurity Act 1993”. The discharge of sewerage from boats is controlled by RMA regulations<sup>40</sup> and the discharge of greywater is provided for in the Plan as a permitted activity, subject to conditions (36.2.2.8). Due to the proposed restrictions on commercial activity and accommodation within the Mooring Areas, the existing regulations and rules, it is anticipated that discharges within the Mooring Areas will be negligible, if any.

---

<sup>40</sup> New Zealand Government (1998) Resource Management (Marine Pollution) Regulations 1998

## **15.10 Marine And Coastal Birds**

### **15.10.1 Aspirations**

*Ngāti Tama cultural associations with marine and coastal birds are protected. Marine and coastal bird nesting and feeding areas are protected from developments in marine coastal areas.*

### **15.10.2 Issues**

*Many marine birds found within the coastal areas are taonga species. However these taonga are at risk from:*

- activities which disrupt nesting and feeding areas;*
- seabird by catch through inappropriate fishing practices;*
- the loss of indigenous coastal habitat;*
- pollution such as the discharge of water and the presence of plastics (which can be mistaken for food and fed to young birds); and*
- global weather patterns and ocean warming.*

### **15.10.3 Actions**

*a. Ngāti Tama works with statutory authorities to make sure management plans recognise traditional associations with marine and coastal bird populations and protect these taonga from potentially disruptive or life threatening activities.*

*b. Ngāti Tama places conditions on coastal land use consents to protect the nesting and feeding areas of ngā manu populations.*

The “*Biological report in relation to proposed mooring areas located between Waimea Inlet and Whanganui Inlet: Biological features, habitats and issues*”<sup>41</sup> identified potential effects on shorebirds at two of the proposed Mooring Areas. A further assessment <sup>42</sup>was undertaken regarding the two sites and the assessment found that the proposed Otuwhero and Motueka Mooring Areas would not result in adverse effects on any threatened or at risk bird species. It should be noted that the area proposed for mooring at Otuwhero has changed since the assessment was undertaken. However, based on comments in the assessment it is considered that the new mooring area is unlikely to affect shore birds.

The aspirations, issues, and actions within the Ngati Tama ki Te Waipounamu Trust – Environmental Management Plan 2018 are considered to be not to dissimilar to those of the plan change. Further discussion with Nagti Tama is expected and any matters which have been missed or are considered to be inconsistent will be addressed through the Section 32 evaluation process.

## **2.4 Regional Policy Statements and Regional Plans**

---

<sup>41</sup> Appendix B

<sup>42</sup> Appendix C

Sections 67(3)& (4) of the RMA requires the plan change to give effect to any national policy statement (including the NZCPS) and any regional policy statement. The plan change must also not be inconsistent with other regional plans including the regional coastal plan.

An assessment against the NZCPS can be found in Section 2.1.1 of this evaluation report. The plan change is not thought to be affected by any other national policy statements. It is anticipated that the format of this plan change may need to change after April 2019, to give effect to the National Planning Standards.

The plan change has been assessed against the *other regional plans* (Part IV – Rivers and Lakes and Part V Water of the Tasman Resource Management Plan) and is not considered inconsistent with those plans.

The assessment against the Tasman Regional Policy Statement and the Tasman Resource Management Plan (Plan) follows.

## **2.4.1 Tasman Regional Policy Statement (2001) (TRPS)**

The purpose of a regional policy statement is to promote the sustainable management of natural and physical resources. The TRPS does this by providing an overview of the resource management issues facing Tasman and by setting objectives, policies and methods to manage Tasman's natural and physical resources. The TRPS establishes the framework for the Plan and this plan change.

TRPS was made operative (2001) and is currently under review. The TRPS reflects Section 5, 6, 7, & 8 of the RMA which has remained relatively unchanged since 2001 however, it was written prior to the 2010 New Zealand Coastal Policy Statement and to that extent many of the provisions need to be updated. For this reason, lesser weight is given in this assessment to the TRPS than for the assessment under the 2010 New Zealand Coastal Policy Statement in section 2.1.1 of this evaluation report.

The following TRPS provisions are considered relevant.

***General Objective 3*** – *Avoidance, remedying or mitigating the adverse effects on the environment and the community from the use, development or protection of resources.*

***General Objective 4*** – *Efficient use and development of resources.*

***General Objective 5*** – *Maintenance of economic and social opportunities to use and develop resources in a sustainable manner.*

Assessments have been undertaken regarding the effects of the plan change on the environment and the community<sup>43</sup>. Where adverse effects are identified the plan change has been amended to avoid, remedy or mitigate those effects.

The plan change and draft Bylaw seek to introduce a new system of mooring management which enables efficient use of the coastal marine area. In most Mooring Areas it is anticipated that the area used for mooring will reduce<sup>44</sup>. The proposed new mooring management framework should enable lower cost/ moor affordable access to moorings by the community. The proposed changes also seek to introduce a new management framework for moorings in Kaiteriteri which should help facilitate commercial and public use of the area. The proposed rules enable unwanted structures to be removed more easily from the coastal marine area and introduce new provisions which help protect existing infrastructure from new coastal uses.

**General Objective 6** -Protection and enhancement of significant natural, heritage and cultural values of resources.

**Policy 4.2** - Council will seek protection of wahi tapu, water, ancestral lands, sites, coastal resources and other taonga from disturbance or contamination in a manner consistent with tangata whenua kaupapa and tikanga while acknowledging the significance of private interests in land and other resources users.

**Objective 9.6** Coastal landuse and development that avoids, remedies or where appropriate mitigates adverse effects on: ... (iv) heritage values.

**Policy 9.3** The Council will provide for activities in the coastal marine area, while avoiding, remedying or mitigating their adverse effects: ... (ii) the amenity values of the locality, including heritage values;

An assessment has been undertaken regarding the effects the plan change will have on the heritage values<sup>45</sup>. It was considered that the Mooring Areas would not adversely affect heritage values. Council has consulted with iwi and no specific issues have been raised regarding the proposed Mooring Areas. An assessment was taken regarding the visual and landscape effects of the plan change and the effects were found to be negligible<sup>46</sup>.

The plan change proposes to introduce new rules enable the removal of costal structures as permitted activities subject to conditions. In the assessment report<sup>47</sup> it was found that the draft provisions would have enabled structures with heritage values to be removed, as a permitted activity. The draft rules were subsequently amended to exclude the removal of Heritage New Zealand listed structures or structures listed in the Schedule 16.13 of the Plan.

---

<sup>43</sup> Appendix B-G and through this section 32 evaluation report

<sup>44</sup> Appendix F

<sup>45</sup> Appendix D

<sup>46</sup> Appendix G

<sup>47</sup> Appendix D

**Objective 9.2** *Opportunities for boating practices and uses of the sea that are safe and avoid, remedy or mitigate adverse effects on other coastal activities and values.*

**Policy 9.2** - *The Council will seek to minimise navigation and safety risks arising from boating and aquaculture activities in a consistent and efficient manner.*

**Policy 9.3** - *The Council will provide for activities in the coastal marine area, while avoiding, remedying or mitigating their adverse effects on:... (iii)public access and multiple use, including any degree of occupation (exclusion) sought; ...(vi)existing and potential uses of the locality; ... and whether these effects can be avoided, remedied, or mitigated.*

**Objective 9.6** - *Coastal land use and development that avoids, remedies or where appropriate mitigates adverse effects on: ... (ii) public access to and along the coast;...*

**Objective 9.8** - *Maintenance and enhancement, where appropriate, of public access to and along the coast.*

**Policy 9.9** - *Council will maintain and where appropriate enhance public access to and along the coast.*

The plan change introduces provisions which support recreational boating through dedicated mooring areas and facilitates the safe placement and regulation of moorings in the District. The proposed Mooring Areas have been located in areas which have a minimal effect on other coastal activities <sup>48</sup>.

**Objective 9.4** *A fair and efficient process for the allocation of rights to use parts of the coastal marine area, especially where parties are in competition for a limited area.*

**Policy 9.4** *The Council will establish procedures for the allocation of sea space between competing applicants that are fair and efficient.*

The existing provisions in the Plan allocate the right to apply for a mooring on a first in first served basis. These provision remain in place for all areas outside of the proposed Mooring Areas. The plan change and accompanying draft Bylaw introduces a new method for allocating space within the Mooring Areas. The RMA requires a report (Section164H(1H) Report ) separate to this Section 32 evaluation report, where an allocation method is proposed other than first in first served. The Section 164H(1H) Report assessing the allocation method proposed, will be made available when the plan change is notified (still being drafted).

Overall, it is considered that the plan change gives effect to the TRPS.

---

<sup>48</sup> Appendix F

## 2.4.2 Tasman Resource Management Plan (Plan)

The Tasman Resource Management Plan consists of the district plan and regional plans (including the regional coastal plan) for the Tasman region. The plan change seeks to amend the regional coastal plan part of the Plan and the changes are required to be not inconsistent with other regional plans (Section 67(4)). The current regional coastal plan was made operative in 2011, prior to the 2010 New Zealand Coastal Policy Statement. The current provisions in the Plan do not fully give effect to the NZCPS and for this reason greater weight is given to the assessment against the NZCPS than this assessment (See section 2.1.1 of this Section 32 evaluation report).

The following provisions in the Plan are considered relevant.

### **20.1.2 Objective**

*Safe navigation, amenity values and natural values that are not compromised by the passage of craft, or by other activities on the surface of the water.*

### **20.1.3 Policies**

*20.1.3.1 Council will ensure that movements of craft or other activities on the surface of coastal waters do not create or aggravate risks to safe navigation, particularly in areas of intensive seasonal use of craft and in relation to the scale, intensity, frequency, duration and mix of activities.*

*20.1.3.2 To avoid, remedy or mitigate adverse effects on safe navigation from structures, occupation or other uses of the coastal marine area, especially in established fishing areas, ports or their approaches, or in other intensively used coastal marine space.*

*20.1.3.3 To avoid, remedy or mitigate adverse effects on amenity values and natural values, including:*

*(a) disturbance of wildlife or marine mammals;*

*(b) disruption to natural quiet;*

*(c) degrading the quality of experience of particular activities;*

*from the scale, intensity, frequency, duration or mix of activities using craft....*

### **20.1.30 Principal Reasons and Explanation**

*Activities involving the movement of watercraft, including vessels and aircraft, in coastal waters may create navigational safety risks, particularly in the vicinity of other craft, people or structures in the coastal marine area. There is a need to control features such as speed, location, seaworthiness and operator competence in relation to craft movements. As well, there is a need to control the siting, marking and lighting of structures in the coastal marine area to avoid or reduce the risk of craft colliding with structures, particularly in areas most often used by craft. Amenity and natural values can be affected by the use of craft. The New Zealand Coastal Policy Statement requirement for the Navy Hydrographer to be advised of new structures in the coastal marine area assists safe navigation by enabling marine charts to be amended and notices to mariners to be issued.*

The plan change proposes to introduce three new policies in this section and update the text to reflect current NZCPS wording. The first policy (20.1.3.#) seeks to reduce the navigational and safety risk to other coastal users by establishing mooring areas in appropriate locations. The second policy (20.1.3.#) seeks to avoid incompatible activities locating in the mooring areas and the third policy (20.1.3.#) seeks to minimise the space occupied by moored and anchored craft.

A number of assessments<sup>49</sup> have been undertaken regarding the effect of the proposed changes on navigation, amenity values and natural values. The changes proposed in the plan change support Objective 20.1.2 and associated policies.

### **21.1.2 Objective**

*Preservation of the natural character of the coastal marine area, particularly its margins, and including the maintenance of all values that contribute to natural character, and its protection from the adverse effects of use or development.*

### **21.1.3 Policies**

*21.1.3.1 To avoid, remedy or mitigate adverse effects on the natural character of the coastal marine area from activities, including:*

- (a) physical modification to foreshore or seabed, including reclamation, dredging, removal or deposition of material, or other disturbance;*
- (b) disturbance of plants, animals, or their habitats;*
- (c) structures, including impediments to natural coastal processes;*
- (d) the use of vessels or vehicles;*
- (e) stock grazing or trampling on coastal margins;*
- (f) the discharge of any contaminant or waste.*

*21.1.3.2 To avoid, remedy or mitigate adverse effects on outstanding or other significant natural features and seascapes in the coastal marine area, including natural expanses of coastal water, arising from modification other than through natural processes.*

*21.1.3.3 To restrict the placement of structures in or along the coastal marine area to those for which a coastal location is necessary and whose presence does not detract from the natural character of the locality, including the natural character of adjoining land.*

*21.1.3.4 To avoid, remedy, or mitigate damage to foreshore, seabed and coastal marine animals and plants, caused by the passage of people, vehicles, vessels, or passage or grazing by stock.*

The plan change proposes to introduce two new policies to this section and update the text to reflect current NZCPS wording. The first policy (21.1.5.) seeks to provide for the removal of unwanted structures etc. The second policy (21.1.3.6) seeks to minimise the effects of moorings on natural character by identifying appropriate locations and encouraging moorings to establish in these areas.

Assessments have been undertaken regarding the effect of the proposed changes on natural character<sup>50</sup>. It is considered that the proposed changes will enhance natural character over time, by clustering moorings into appropriate locations and

---

<sup>49</sup> Appendix B and G

<sup>50</sup> Appendix B and G

facilitating the removal of unwanted structures etc. The changes proposed in the plan change are considered to support Objective 21.1.2 and associated policies.

### **21.2.2 Objective**

*Avoidance, remediation, or mitigation of adverse effects on marine habitats and ecosystems caused by:*

- (a) *access by vessels, vehicles, people, or animals;*
- (b) *the introduction of species non-indigenous to the District;*
- (c) *disturbance of the foreshore or seabed;*
- (d) *the placement and use of structures for port, berthage, aquaculture, network utilities, roads, mineral extraction or any other purpose;*
- (e) *the disposal of contaminants or waste, or accidental spillage of substances; with priority for avoidance in those areas having nationally or internationally important natural ecosystem values.*

### **21.2.3 Policies**

*21.2.3.1 To assess existing unauthorised structures or works in the coastal marine area and either require their authorisation or removal after considering the significance of the effects of such structures or works on:*

- (a) *natural character;*
- (b) *natural coastal processes and patterns;*
- (c) *coastal habitats and ecosystems, particularly those supporting rare or endangered indigenous or migratory species, or nationally or internationally significant natural ecosystems;*
- (d) *public access to coastal marine space;*
- (e) *visual amenity and landscapes or seascapes;*
- (f) *navigational safety;*
- (g) *historic and cultural values. ...*

*21.2.3.3 To avoid, remedy or mitigate adverse effects of structures or works in the coastal marine area, for any purpose, on:*

- (a) *natural character;*
- (b) *natural coastal processes and patterns;*
- (c) *coastal habitats and ecosystems, particularly those supporting rare or endangered indigenous or migratory species, or nationally or internationally significant natural ecosystems;*
- (d) *public access to coastal marine space;*
- (e) *visual amenity and landscapes or seascapes;*
- (f) *navigational safety;*
- (g) *historic and cultural values. ...*

*21.2.3.5 To avoid, remedy or mitigate adverse effects from the maintenance, replacement or protection of utility structures or facilities, including roading structures, wharves, or jetties, in the coastal marine area.*

*21.2.3.6 To require the removal of disused or obsolete structures except where removal would have adverse effects on the environment or where the structure is registered under the Historic Places Act 1993. ...*

*21.2.3.12 To prevent structures or works on the foreshore and intertidal flats within and adjacent to the Farewell Spit Nature Reserve, except in relation to marine mammal rescue or burial...*

*21.2.3.14 To avoid, remedy or mitigate adverse effects of structures (including moorings) in the coastal marine area between Tata Islands and Toko Ngawa Point.*



21.2.3.15 *To retain the open space of Kaiteriteri Bay without further structures other than the existing boat ramp and moorings of the Kaiteriteri Recreation Reserve Board. ...*

21.2.3.18 *To limit the number, location, and scale of structures in the coastal marine area adjoining the Abel Tasman National Park in accordance with the following:*

- (a) *one public mooring at each of Tata Islands, Mutton Cove, and Taupo Point;*
- (b) *two boat ramps at Totaranui;*
- (c) *a water pipe at Bark Bay;*
- (d) *a jetty for public use at Torrent Bay/Rākauroa;*
- (e) *swing moorings will be allowed only in association with an interest in a land title at Boundary Bay, Torrent Bay/Rākauroa, or Astrolabe Roadstead, and only to the extent that the cumulative effect of moorings at each location is not adverse;*
- (f) *swing moorings at The Anchorage are limited to one for each private property at The Anchorage (as at 25 May 1996), plus one other existing mooring.*
- (g) *structures or moorings will not be allowed adjacent to Adele/Motuareronui or Fisherman's island. ...*

21.2.3.21 *To restrict structures and disturbance such as port developments, jetties, moorings or aquaculture from locating in areas where they would adversely affect nationally or internationally significant natural ecosystem values or significant habitats such as estuaries and intertidal areas. ...*

21.2.3.24 *To eradicate invasive non-indigenous species where practicable and protect coastal marine habitats and ecosystems from invasion by non-indigenous species. ....*

The plan change proposes to amend three existing policies in this section and update the text. Policy 21.2.3.6 is largely amended to update the wording and give effect to the NZCPS. Policy 20.2.3.15 amendments are mostly consequential giving effect to the proposed Mooring Areas. It is proposed in Policy 20.2.3.15 to add “swimming platform” to the list and this represents a change to include more structures within the Bay. The swimming platform has been assessed against this policy and currently holds a resource consent until 2028. The addition of the swimming platform is not thought to materially affect the open space of the Bay. Policy 21.2.3.18(c)&(d) changes are consequential amendments. The change to Policy 21.2.3.18 broadens the type of mooring structures that can be used and the introduction of Mooring Areas, may slightly increase the number of moorings in the area. An assessment has been undertaken regarding the effects of the proposed Mooring Areas on biologic features and habitat at Torrent and Boundary Bay<sup>51</sup> and no modifications to the proposed areas was suggested.

The changes proposed in the plan change are considered to give effect to Objective 21.2.2.

### *21.3.2 Objective*

*Maintenance of the natural character and landscape of the coastal marine area.*

---

<sup>51</sup> Appendix B pg 23

### 21.3.3 Policies

*21.3.3.1 To allow structures or physical modifications in the coastal marine area only where the effect on the natural components of landscape and seascape values of the area, including any contribution to any likely cumulative effect, is limited in extent and is consistent with the existing degree of landscape and seascape modification.*

The plan change amends Policy 21.3.3.1 to include “mooring areas and structures” and introduces a new Policy 21.3.3.2, requiring the removal of unwanted structures, except where the removal would have adverse effects on the environment or where the structures has heritage of cultural values. The proposed changes should maintain and enhance the natural character and landscape of the coastal marine area by preventing the establishment in of structures in inappropriate locations and enabling the removal of structures which are not longer needed. The changes proposed in the plan change are considered to give effect to Objective 21.3.2.

### 21.5.2 Objective

*Maintenance of the cultural heritage values of items, sites or areas in the coastal marine area, including taonga of the tangata whenua.*

### 21.5.3 Policies...

*21.5.3.3 To ensure that no historical heritage item in the coastal marine area is a danger to navigation.*

No changes are proposed to these provisions in Plan by the plan change. An assessment of the impact of the plan change on historic heritage<sup>52</sup> has been undertaken and changes were suggested. The suggested change has been made to the plan change. It was also suggested that a broader review of the provisions needs to occur, which will commence during the review of the regional coastal plan in 2021. Iwi have been consulted and no concerns have been raised regarding the location of the Mooring Areas or the proposed rules and policy. Heritage New Zealand have been consulted and they also raise no issues. The changes proposed in the plan change are considered to give effect to Objective 21.5.2.

### 21.6.2 Objective

*Maintenance and enhancement of public access in the coastal marine area, including public passage or navigation:*

- (a) while preserving natural character, and maintaining ecosystems, heritage, and amenity values; and*
- (b) without undue hazard or loss of enjoyment as a result of private occupation or use of coastal marine space.*

### 21.6.3 Policies

*21.6.3.1 To avoid, remedy or mitigate adverse effects of facilities for access to and from the coastal marine area.*

---

<sup>52</sup> Appendix D

21.6.3.2 *To avoid, remedy or mitigate adverse effects of private occupation of space in the coastal marine area, having regard to the common right of public access to or in that area.*

21.6.3.3 *Public access in the coastal marine area will be restricted only where necessary to:*

- (a) *protect areas of significant indigenous vegetation and significant habitats of indigenous fauna;*
- (b) *protect cultural and spiritual values of the tangata whenua;*
- (c) *protect public health and safety;*
- (d) *ensure consistency consistent with the purpose of a resource consent; or other exceptional circumstances.*

The plan change proposes minor changes to Policy 21.6.3.2 which reflects Policy 6(2)(c) of the NZCPS and introduces a new Policy 21.6.3 which requires the removal of unwanted structures. New policy (21.6.3.#) seeks to provide for mooring areas and public multiple use structures where the structures will enhance public access. It is anticipated that public access over time will be enhanced, with a reduction in the area currently taken by unauthorised moorings and through locating Mooring Areas away from the foreshore. The location of the Mooring Areas has been specifically considered with regard to navigation and safety and amended where necessary<sup>53</sup>. The changes proposed in the plan change are considered to give effect to Objective 21.6.2.

### *21.7.2 Objective*

*Maintenance and enhancement of the amenity value derived from the natural character of the coastal marine area.*

### *21.7.3 Policies*

21.7.3.1 *To avoid, remedy or mitigate the adverse effects of activities in the coastal marine area, including structures for its use and enjoyment, on the amenity values of any part of the coastal marine area or coastal land, particularly on those values dependent on natural character, such as in areas adjacent to national parks, estuaries and open beaches, and taking into account:*

- (a) *location*
- (b) *permanence*
- (c) *size and number*
- (d) *frequency and duration of use*
- (e) *need to exclude other activities or people.*

No changes to the above objective and policy in the Plan are proposed in the plan change. An assessment of effects was undertaken regarding visual effects and effects on natural character from the proposed Mooring Areas and Schedule 25B changes. The assessment found the effects were negligible<sup>54</sup>. The changes proposed in the plan change are considered to give effect to Objective 21.7.2.

---

<sup>53</sup> Appendix F

<sup>54</sup> Appendix G

The provisions in Chapter 22 Aquaculture are not relevant or affected by the plan change.

The provisions in Chapter 23 Natural Hazards and Hazardous Substances are not relevant or affected by the plan change.

The provisions in Chapter 24 Noise Emissions are not particularly relevant or affected by the plan change.

## 3. PLAN CHANGE DEVELOPMENT

### 3.1 Process

Date		
17 Oct 2013	Presentation	To CVL operators
4 July 2013	Environment and Planning Committee	Approval for consultation on options paper for managing moorings.
28 Nov 2013	Environment and Planning Committee	Bylaw workshop
Dec 2013	In house	Costing comparison between status quo and proposed.
Jan to March 2014		Discussion Paper
22 May 2014	Environment and Planning Committee	Considered the assessment of feedback on the mooring review and made the decision to <i>“Instructs staff to prepare a Draft Plan Change that adopts Option 1 as amended following feedback on the Mooring Review Discussion Document and include accounting for findings of ecological assessments where required”</i> .
30 Oct 2014	Kaiteriteri	Concession holders meeting
Nov 2014	Iwi	Iwi consultation
4 Dec 2014	Kaiteriteri	Concession holders meeting
19 May 2015	Council Workshop	Council updated and direction given on new matters identified through the drafting process.
2015	Recreation and Navigation assessment	Final
8 Aug 2015	Shorebird assessment	Final
11 Oct 2015	Ecological assessment	Final
15 Oct 2015	Kaiteriteri	Concession holders meeting
23 Sept 2015	Mapua Seabed assessment	Final
June 2016	In house	Discussions on Kaiteriteri mooring options
13 Feb 2017	Iwi Working Group	Discussion of draft Bylaw and Plan Change
24 May 2017	Ngati Koata	Hui
31 May 2017	Ngati Apa	Hui
6 June 2017	Te Atiawa	Hui
8 June 2017	Te Runanga o Ngati Kuia	Hui

5 Jan 2018	Assessment of Moorings on Different Types of Marine Habitat	External Document
21Mar 2018	Council Workshop	Workshop on draft Plan Change/ Bylaw
11 Nov 2018	Visual, Natural Character and Landscape Effects assessment	Final
Nov 2018	Historic Heritage assessment	Final
18 April 2018	Environment and Planning Committee	Consideration of the draft plan change and bylaw. Approval to notify for feedback.

## 3.2 Consultation

- Discussions have been held with various community groups and commercial operators since 2013. Three Newsline articles were distributed in Dec 2013 and Feb 2014.
- Letters regarding the options paper was sent to various interested parties, iwi and relevant government departments.
  - Letters to Iwi, Jan 2014
  - Letters to potentially affected parties, Jan 2014
  - Letters to consent holders, Jan 2014
  - Letters to potentially interested organisations, Jan 2014
  - Letters to CVO Licences holders, Jan 2014
  - Letters to Marine farmers, Jan 2014
- Formal public consultation commenced on 6th January 2014 with the release of an options paper. Feedback was sought from the community. The public were consulted on two options: Option 1: create a new mooring area, with combined Plan and Bylaw changes; Option 2: retain existing system. Six public meetings were held.
  - Motueka Community Board and public meeting, Feb 2014
  - Waimea Inlet Forum, Feb 2014
  - Mapua Boat Club public meeting, 3 March 2014
  - Richmond Council Chambers public meeting, 6 March 2014
  - Takaka public meeting, 10 March 2014
  - Motueka public meeting, 13 March 2014
- A total of 67 responses were received there was a general support for Option 1 (new mooring areas). A number of issues were raised in the feedback and those issues have been addressed either through amendments to the bylaw

and the plan change or further considered through the various assessment reports (see Appendices).

- A meeting was held with the Mangakarau mooring owners, 2 May 2014
- The proposal was discussed at a concession holders meeting – 30 October 2014
- A meeting was held on the 4 December 2014 at Kaiteriteri with the commercial operators and the Kaiteriteri Recreation Reserve Board regarding the moorings in the seaward Kaiteriteri mooring area. It had been identified that the current demand for moorings was unlikely to be met within the proposed mooring area, using swing moorings. Alternative mooring systems were explored and the potential to increase the mooring area was investigated. A further meeting was held on 15 Oct 2015 to discuss options for Kaiteriteri Mooring Area 2.
- A meeting was held with the Mapua Boating Club representatives regarding the changes proposed and the effect on the boating club members. Specific issues were discussed regarding the unique nature of the site and the practicalities of monitoring and inspecting moorings at that site.
- Iwi Working Group Hui -13 February 2017 Te Atiawa, Ngati Kuia, Ngati Apa and MKM.
- Ngati Koata Hui 24 May 2017, Ngati Apa Hui 31 May 2017, Te Atiawa Hui 6 June 2017, Te Runanga o Ngati Kuia 8 June 2017,
- Draft of Bylaw sent to Maritime New Zealand, response 21 May 2018. Changes suggested incorporated into the draft Bylaw.
- Numerous meetings and correspondence, with various staff from the Department of Conservation. Department of Conservation staff were provided a copy of the draft plan change, Bylaw and some of the assessment reports. Feedback was responded to or incorporated into the plan change/bylaw.

### **3.3 Site visits**

24 <sup>th</sup> September 2014 (by sea)	Motueka 1, Tapu and Stephens Bay, Kaiteriteri, Otuwhero Inlet, Glasgow, Torrent and Boundary Bays
24 October 2014	Mapua
1 November 2014	Kaiteriteri
24 November 2014	Magarakau, Milnthorpe, Otuwhero Inlet, Stephens Bay, Tapu Bay, and Motueka 1&2
28 <sup>th</sup> November 2014	Motueka 1 & 2, Mapua and Ligar Bay
4 December 2014	Otuwhero, Kaiteriteri
17 January 2015	Kaiteriteri, Otuwhero, Stephens and Tapu Bay
15 Oct 2015	Kaiteriteri

20 Jan 2018	Kaiteriteri
Sept 2018 (by sea)	Motueka 1, Tapu, Stephens Bay, Kaiteriteri, Otuwhero, Marahau, Torrent, Boundary, Bark Mosquito Bays, Watering Cove, Awaroa.
21 Oct 2018	Kaiteriteri
20 Jan 2019	Ligar Bay



## 4 DO THE PLAN CHANGE OBJECTIVES ACHIEVE THE PURPOSE OF THE ACT?

Section 32(1)(a) of the RMA requires Council to examine of the extent to which the objectives of the plan change are the most appropriate way to achieve the purpose of the RMA.

To date, Section 32 case law has interpreted most appropriate to mean “*suitable, but necessarily superior*”. “*This means that the most appropriate option does not need to be the most optimal or best option, but must demonstrate that it will meet the objectives in an efficient and effective way. The Court has found previously that it is not necessary for each objective to be the most appropriate way of achieving the purpose of the Act. This is because objectives may interrelate and have overlapping ways of achieving sustainable management*”.<sup>55</sup>

In addition, the Supreme Court decision on King Salmon found that the New Zealand Coastal Policy Statement (2010) (NZCPS) gives substance to Part 2 of the Act in relation to the coastal environment and there is generally no need to refer back to the RMA when determining if the plan change “*achieves the purpose of the Act*”. This means that Council under Section 32 needs to assess the objectives of the plan change for “appropriateness” against the provisions in the New Zealand Coastal Policy Statement (2010).

Section 2.1.1 of this report assesses the provisions of the plan change against the New Zealand Coastal Policy Statement (2010) in some detail, however, that assessment does not include the assessment against the objectives, as required by Section 32. For this reason while it may seem repetitious, a brief assessment of the objectives against the NZCPS is provided below in section 4.1. This assessment should be read in conjunction with the assessment in Section 2.1.1 which assesses the plan change in greater detail.

### 4.1 Plan Change Objectives.

#### 4.1.1 Objectives

The objectives<sup>56</sup> of this plan change are:

- 1) **Efficient use of space:** a) enable and provide for efficient and flexible use of space within the coastal marine area for moorings; b) promote and provide for the removal of obsolete, redundant or abandoned structures within the coastal marine area; and c) encourage the establishment of public moorings to enable the greatest use of space.

---

<sup>55</sup> MFE – a Guide to section 32 of the Resource Management Act 1991

<sup>56</sup> See section 1.3.2 of this Section 32 report.

- 2) **Allocation of Coastal Space:** provide an alternative method of allocation of space for moorings, within defined Mooring Areas.
- 3) **Strategic Planning:** a) identify appropriate areas for permanent mooring and provide for moorings in those areas through the establishment of Mooring Areas; b) prevent new coastal activities from adversely affecting moorings within the Mooring Areas; c) prevent new coastal activities from adversely affecting existing network utilities within the coastal marine area.
- 4) **Navigation and Safety:** a) require all moorings to be located, constructed and maintained to a standard that supports the navigational safety of all coastal users; b) establish Mooring Areas in locations which do not effect recognised anchorages or maritime routes within the coastal marine area. c) enable the removal of obsolete, redundant or abandoned structures within the coastal marine area.
- 5) **Integrated planning:** a) Support the requirements of the Marine and Coastal Area Act 2011 by introducing provisions which enable a record of all owners of coastal structure owners to be kept. b) Authorise key public structures on the foreshore and coastal marine area adjacent to the Abel Tasman National Park, where appropriate, to give effect to policy (in part) in the Abel Tasman Scenic Foreshore Reserve Management Plan regarding unauthorised structures.

## 4.1.2 Assessment

Policy 6(2)(e) of the NZCPS requires Council to promote the efficient use of the occupied space in the coastal marine area and identifies three tools available to support efficient use, including through facility sharing, requiring the removal of abandoned or redundant structures and consent conditions to ensure timely and effective use.

The Department of Conservation Guidance Note<sup>57</sup> for Policy 6 identifies that *“abandoned or redundant structures in the coastal marine area can present issues in terms of health, safety, and environmental effects. Adverse environmental effects can include visual amenity effects, impacts on public access, and reduced water quality (where contaminants are leaching from a structure). Abandoned or redundant structures can also preclude higher value uses or environmental restoration. Proactive management of abandoned or redundant structures is generally desirable. Management options include complete removal, restoration, or relocation to a better place. Any heritage or amenity value associated with abandoned or redundant structures will be relevant in selecting the best management response. The environmental effects of removing a structure should also be assessed, including the effects of gaining access for removal and disturbance of the foreshore and seabed and surrounding land.”*

---

<sup>57</sup> Department of Conservation (2018) NZCPS 2010 Guidance note Policy 6: Activities in the coastal environment.

Objective 1 of the plan change achieves and is consistent with Policy 6(2)(e) of the NZCPS. Objective 2 of the plan change also gives effect to Policy 6(2)(e) by enabling the efficient use of space within the Mooring Areas through an alternative method of allocating space.

Policy 6 of the NZCPS lists specific principles about the location and scale of activities in the coastal environment. Priority is given to activities with a functional need to locate and operate in the coastal marine area, and providing for those activities in appropriate places. Policy 6 of the NZCPS also encourages consideration of certain coastal values including built character, headlands and ridgelines, natural character, open space, public access, amenity, public access, indigenous biodiversity and historic heritage. Policy 6 of the NZCPS has strong links with other NZCPS objectives and policies e.g. Policy 11, 13, and 15. Policy 7 of the NZCPS is particularly related to Policy 6 and read together, Policies 6 and 7 require a strategic and forward thinking approach to planning for the coastal environment. It is acknowledged that moorings have a functional need to locate in the coastal marine area and Objective 3 of the plan change identifies appropriate locations for moorings within the coastal marine area. Objective 3 gives effect to Policy 6, 7, 11, 13, and 15 of the NZCPS.

Policy 6 of the NZCPS also seeks consideration of the 'reasonably foreseeable needs of population growth, for built development, public infrastructure and energy generation. Objective 3(b) & (c) of the plan change seeks to protect existing public infrastructure from other activities, which should reduce the need for additional infrastructure to be established or relocated within the coastal marine area. The reasonably foreseeable need for moorings were assessed as part of the evaluation of the Mooring Areas.

Objectives 4 and 5 of the plan change achieves Policy 4, which requires Council to work collaboratively with other bodies and agencies with responsibilities and functions relevant to resource management. Objective 4 supports and gives effect to navigational safety matters under the Maritime Transport Act 1994. Objective 5 of the plan change also supports and gives effect to the Abel Tasman Scenic Foreshore Reserves Management Plan, and the Marine and Coastal Area (Takutai Moana) Act 2011). See section 2.2 of this evaluation report for a more detailed assessment of the integrated relationship between the plan change and other legislative and statutory documents.

The five Objectives of the plan change are considered to be the "*most appropriate way to achieve the purpose of the Act*", as defined by the NZCPS.

## 5. DO THE PROPOSED CHANGES ACHIEVE THE OBJECTIVES OF THE PLAN CHANGE?

The provisions in this plan change consist of new policies, rules and methods and also amendments to the existing policies, objectives, methods and maps. The purpose of this evaluation under Section 32(1)(b) of the RMA is to assess whether the proposed changes are the “most appropriate way” to achieve the objectives of the plan change.

This is the second part of the evaluation required under Section 32 of the RMA, the first part (32(1)(a)) requires Council to make sure the plan change meets to the purpose of the RMA, the second part (32(1)(b)) requires Council to make sure the best methods are used to meet the objectives of the plan change.

Section 32(3) also requires Council to evaluate the proposed provisions against the current objectives in the Plan. This evaluation helps achieve internal consistency with the objectives in the Plan and make sure the proposed changes do not undermine the current provisions.

Section 32(1)(b) of the RMA set out a range of matters that Council must consider when determining the “appropriateness”. These matters are addressed in Section 5.1 – 5.3 below.

### 5.1 Options for Achieving the Objectives.

As part of evaluating the provisions, reasonably practicable options for achieving the plan changes objective must be identified. “Reasonably practicable” is not defined in the RMA, but may include regulatory/non regulatory options and should represent a reasonable range of possible alternatives. Section 77 of the Local Government Act 2002 also requires Council to “seek to identify all reasonably practicable options for the achievement of the objectives of a decisions”.

A large number of options for achieving the five Objectives of the plan change have been considered during the drafting, the ones considered reasonably practicable ones are evaluated below.

#### 5.1.1.

Objective 1: Efficient use of space (a) Enable and provide for efficient and flexible use of space within the CMA for moorings.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>• No change</li> <li>• Moorings either permitted, controlled, discretionary or non-complying</li> <li>• Preference for swing</li> </ul>
-----------------	------------	--

		moorings.
<b>Option 2 (Option 1 in Issues and options paper)</b>	Hybrid Option	<ul style="list-style-type: none"> <li>• Create Mooring Areas and enable moorings to establish as a permitted activity subject to holding a mooring license.</li> <li>• Manage moorings through mooring licenses.</li> <li>• Harbourmaster determines where moorings can be located within mooring areas, and specifies the size of the boat and type of mooring that can be used.</li> </ul>
<b>Option 3</b>	Plan Change	<ul style="list-style-type: none"> <li>• Issue short term Resource consents; or</li> <li>• Inclusion of review conditions for mooring location.</li> </ul>
<b>Option 4</b>	Plan Change	<ul style="list-style-type: none"> <li>• Council holds resource consent for all space within a Mooring Area.</li> <li>• Mooring space allocated by Council as holder of the consent.</li> </ul>
<b>Option 5</b>	Hybrid Option	<ul style="list-style-type: none"> <li>• Harbourmaster pre determines where moorings are to be located within the coastal marine area, including the size of the boat and type of mooring.</li> </ul>
<b>Option 6</b>	Hybrid Option	<ul style="list-style-type: none"> <li>• Enable mooring holders within a mooring area to establish methods of self-management, including location, size of boat and type of mooring.</li> </ul>
<b>Option 7</b>	Plan change	<ul style="list-style-type: none"> <li>• Provide for and encourage the use of more space efficient mooring systems.</li> </ul>
<b>Option 8</b>	Plan Change	<ul style="list-style-type: none"> <li>• Require all moorings to use the most efficient mooring system.</li> </ul>
<b>Option 9</b>	Plan Change	<ul style="list-style-type: none"> <li>• Council establishes efficient mooring systems within Mooring Areas and recovers the cost of the mooring system through rental charges.</li> </ul>
<b>Option 10</b>	Plan Change	<ul style="list-style-type: none"> <li>• Provide for all moorings as discretionary activities.</li> </ul>

Options 2, 6, 7, were identified as being reasonably practicable options for achieving Objective 1a).

### 5.1.2

Objective 1: Efficient use of space (b) Promote and provide for the removal of obsolete, redundant or abandoned structures within the coastal marine area.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>• No change – removal of structures defaults to a discretionary activity</li> <li>• Establish ownership on a case by case basis and require a resource consent to remove.</li> </ul>
<b>Option 2</b>	Non-regulatory	<ul style="list-style-type: none"> <li>• No change to provisions.</li> <li>• Provide owners incentives for removal e.g. discounted resource consents, grants.</li> </ul>
<b>Option 3</b>	Plan Change	<ul style="list-style-type: none"> <li>• Provide for the landowner to remove structures as a permitted activity, subject to conditions.</li> <li>• Require a resource consent where the conditions are not met.</li> </ul>
<b>Option 4</b>	Plan Change	<ul style="list-style-type: none"> <li>• Provide for the landowner and other nominated organisations to remove structures as a permitted activity, subject to conditions.</li> <li>• Require a resource consent where the conditions are not met.</li> </ul>

Option 4 was identified as being reasonably practicable option for achieving Objective 1b).

### 5.1.3.

Objective 1: Efficient use of Space (c) Encourage the establishment of public moorings to enable the greatest use of space.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>• No change.</li> <li>• Resource consent required to establish any new mooring.</li> </ul>
<b>Option 2</b>	Non-regulatory	<ul style="list-style-type: none"> <li>• No change to provisions.</li> <li>• Provide incentives e.g. grants, cost share, discounted</li> </ul>

		resource consents for the establishment of public moorings.
<b>Option 3</b>	Hybrid	<ul style="list-style-type: none"> <li>• Council apply for resource consent and maintain public moorings in key locations.</li> <li>• Amend policies to enable public moorings in high use areas e.g Abel Tasman National Park coastal area.</li> </ul>
<b>Option 4</b>	Plan Change	<ul style="list-style-type: none"> <li>• Encourage the establishment of public moorings through policy in the plan.</li> <li>• Give preference to public moorings through resource consent activity status.</li> </ul>
<b>Option 5</b>	Hybrid	<ul style="list-style-type: none"> <li>• Give preference to public moorings in Mooring Areas, under the allocation provisions of the Bylaw.</li> <li>• Encourage the establishment of public moorings through policy in the plan.</li> </ul>

Option 5 was identified as being a reasonably practicable option for achieving Objective 1c).

Note: The method of allocating space within the coastal marine area is discussed further in the separate RMA Section165H report.

#### **5.1.4.**

Objective 2: Allocation of Coastal Space. The method of allocating space within the coastal marine area is assessed in the separate RMA Section165H report.

#### **5.1.5.**

Objective 3: Strategic Planning (a) Identify appropriate areas for permanent mooring and provide for moorings in those areas through the establishment of Mooring Areas.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>• No change –Currently three mooring areas.</li> <li>• Resource consent required to establish new moorings.</li> </ul>
<b>Option 2</b>	Plan Change	<ul style="list-style-type: none"> <li>• Re-assess existing mooring areas in the plan for appropriateness</li> <li>• Identify new areas</li> </ul>

		<p>appropriate for moorings within the coastal marine area.</p> <ul style="list-style-type: none"> <li>• Make moorings within the new areas a controlled or restricted discretionary activity.</li> </ul>
<b>Option 3</b> (Option 1 in Issues and options paper)	Plan Change	<ul style="list-style-type: none"> <li>• Assess existing mooring areas in the plan for appropriateness</li> <li>• Establish new mooring areas in appropriate locations.</li> </ul>
<b>Option 4</b>	Plan Change	<ul style="list-style-type: none"> <li>• Policies set out the matters that need to be considered for future Mooring Areas.</li> <li>• Require the use of appropriate mooring systems, which reduce environmental impacts, outside of the mooring areas.</li> </ul>

Option 3 and 4 were identified as being reasonably practicable options for achieving Objective 3(a).

### 5.1.6.

Objective 3: Strategic Planning (b) Prevent new coastal activities from adversely affecting moorings within the mooring areas.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>• No change.</li> <li>• First in first served.</li> </ul>
<b>Option 2</b>	Plan Change	<ul style="list-style-type: none"> <li>• Include a policy which avoids the establishment of coastal activities within mooring areas where the activity will adversely affect the use of the mooring area for mooring.</li> </ul>
<b>Option 3</b>	Plan Change	<ul style="list-style-type: none"> <li>• Council applies for exclusive use of coastal space within mooring areas.</li> </ul>

Option 2 was identified as being a reasonably practicable option for achieving Objective 3(b)



### 5.1.7.

Objective 3: Strategic Planning (c) Prevent new coastal activities from adversely affecting existing network utilities within the coastal marine area.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>No change, considered through resource consent applications.</li> </ul>
<b>Option 2</b>	Plan Change	<ul style="list-style-type: none"> <li>Require a wide setback from existing utilities.</li> </ul>
<b>Option 3</b>	Plan Change	<ul style="list-style-type: none"> <li>Require a narrower setbacks from existing utilities; and</li> <li>Require structures near utilities, to be correctly located.</li> </ul>

Option 3 was identified as being a reasonably practicable option for achieving Objective 3(c).

### 5.1.8.

Objective 4: Navigation and Safety (a) Require all moorings to be located, constructed and maintained to a standard that supports the navigational safety of all coastal users.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>No change.</li> <li>Mooring standards set out in the resource consent.</li> <li>Require the removal of unconsented moorings where the owner can be determined (not occurring).</li> </ul>
<b>Option 2</b>	Hybrid	<ul style="list-style-type: none"> <li>Require mooring owners to hold a mooring license in addition to a resource consent.</li> </ul>
<b>Option 3</b> (Option 1 in the Issues and options paper)	Hybrid	<ul style="list-style-type: none"> <li>Identify appropriate locations for Mooring Areas in the Plan.</li> <li>Mooring standards detailed in resource consents, outside of the Mooring Areas.</li> <li>Manage location, construction and maintenance through moorings licences issued by the Harbourmaster.</li> </ul>

Option 3 was identified as being a reasonably practicable option for achieving Objective 4(a).

### 5.1.9.

Objective 4: Navigation and Safety (a) Establish Mooring Areas in locations which do not effect recognised anchorages or maritime routes within the coastal marine area.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>• No change.</li> <li>• Mooring Areas already established in areas which do not effect recognised anchorages or maritime routes.</li> </ul>
<b>Option 2</b> (Option 1 in Issues and options paper)	Plan change	<ul style="list-style-type: none"> <li>• Re-assess existing mooring areas for usability and effects on other maritime users.</li> <li>• Establish additional mooring areas to meet demand, in locations that do not effect recognised anchorages or maritime routes.</li> </ul>

Option 2 was identified as being a reasonably practicable option for achieving Objective 4(b).

### 5.1.10.

Objective 4: Navigation and Safety (b) Enable the removal of obsolete, redundant or abandoned structures within the coastal marine area.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>• No change – removal of structures defaults to a discretionary activity</li> <li>• Establish ownership on a case by case basis and require a resource consent to remove.</li> </ul>
<b>Option 2</b>	Non-regulatory	<ul style="list-style-type: none"> <li>• No change to provisions.</li> <li>• Provide incentives for removal e.g. grants, discounted resource consents.</li> </ul>
<b>Option 3</b>	Plan Change	<ul style="list-style-type: none"> <li>• Enable the landowner to remove structures as a permitted activity, subject to conditions.</li> <li>• Require a resource consent where the conditions are not met.</li> </ul>
<b>Option 4</b>	Plan Change	<ul style="list-style-type: none"> <li>• Enable the landowner and other nominated organisations to remove structures as a permitted activity, subject to conditions.</li> </ul>

		<ul style="list-style-type: none"> <li>Require a resource consent where the conditions are not met.</li> </ul>
--	--	--

Option 4 was identified as being reasonably practicable option for achieving Objective 4 c).

### 5.1.11.

Objective 5: Integrated Planning (a) Support the requirements of the Marine and Coastal Area (Takutai Moana) Act 2011 by introducing provision which enable a record of ownership of all coastal structures to be kept.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>No change.</li> <li>Record kept of resource consent holders.</li> <li>Acquire details of ownership through other methods.</li> </ul>
<b>Option 2</b>	Plan change	<ul style="list-style-type: none"> <li>Require all coastal structures to have resource consents.</li> </ul>
<b>Option 3</b>	Plan change	<ul style="list-style-type: none"> <li>Record kept of resource consent holders.</li> <li>Retain existing permitted activities and require ownership details as a condition of consent.</li> </ul>

Option 3 was identified as being reasonably practicable option for achieving Objective 5)(a).

### 5.1.12.

Objective 5: Integrated Planning (b) Authorise key public structures on the foreshore and coastal marine area adjacent to the Abel Tasman National Park, where appropriate, to give effect to policy in the Abel Tasman Scenic Foreshore Reserve Management Plan regarding unauthorised structures.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>No change.</li> <li>Resource consent required for those structures not listed as permitted.</li> </ul>
<b>Option 2</b>	Plan change	<ul style="list-style-type: none"> <li>Give effect to the management plan policies in the establishment of mooring areas.</li> <li>Update Schedule 25A to include some public structures as permitted activities.</li> </ul>

Option 2 was identified as being reasonably practicable option for achieving Objective 5)(b).

## 5.2 Assessment of the Costs and Benefits.

Section 32 requires as part of assessing the appropriateness of the provisions in achieving the objectives that efficiency and effectiveness of the provisions are to be assessed. Effectiveness assesses the contribution new provisions make towards achieving the objective and how successful they are likely to be in solving the problems they were designed to address.

Efficiency measures whether the provisions will be likely to achieve the objectives at the lowest total cost to all members of society, or achieves the highest net benefit to all of society. The assessment of efficiency under the RMA involves the inclusion of a broad range of costs and benefits, both monetary and non-monetary.

Although assessing different things, effectiveness and efficiency are closely connected as they are both aimed at assessing what the most appropriate choice is. They each put a slightly different (but overlapping) focus on the evaluation.

As part of assess efficiency and effectiveness Section 32(2)(a) requires the Council to:

*“Identify and assess the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions, including the opportunities of economic growth and employment that are anticipated to be provided or reduce.”*

A cost can be described as what society has to sacrifice to obtain a desired benefit. A benefit, can be described as a consequence that enhances well-being within the context of the RMA. The RMA defines costs and benefits to include those that are both monetary and non-monetary.<sup>58</sup> Identification of the benefits and cost of provisions in a plan change ensures the effects are thoroughly evaluated.

As part of assessing the efficiency and effectiveness of proposed provisions, an evaluation must also take into account the risk of acting or not acting where there is uncertain or insufficient information. This following section assess the costs and benefits of the options (status quo and preferred option) and assesses of the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions.

### 5.2.1

Objective 1: Efficient Use of Space a) Enable and provide for efficient and flexible use of space within the coastal marine area for moorings.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"><li>• No change</li><li>• Moorings either permitted, controlled, discretionary</li></ul>
-----------------	------------	--

<sup>58</sup> MFE – a Guide to section 32 of the Resource Management Act 1991

		or non-complying. <ul style="list-style-type: none"> <li>• Preference for swing moorings.</li> </ul>
	Benefits	Costs
Environmental	<ul style="list-style-type: none"> <li>• Low numbers of resource consents applied for, limited space taken up by authorised moorings.</li> <li>• Moorings located where there is space is available.</li> </ul>	<ul style="list-style-type: none"> <li>• Boat owners continue to establish unauthorised moorings in locations which may adversely affect access and the environment.</li> <li>• Un-coordinated placement of moorings (authorised and unauthorised) leading to inefficient use of public space.</li> <li>• Inability to set standards for permitted moorings. No policy support to require the use of efficient mooring systems.</li> <li>• Provisions encourages the use of swing moorings which are relatively inefficient and have higher impacts on the seabed than other systems.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>• No plan change required.</li> <li>• Least cost mooring system can be used.</li> <li>• Low administrative costs, once resource consent granted.</li> <li>• Unauthorised moorings are commonly established at a very low cost.</li> </ul>	<ul style="list-style-type: none"> <li>• In areas where there is high demand and inefficient use of the space, then boat owners have to travel a greater distance to store their boat. Alternative boat storage may be more expensive.</li> <li>• Economic loss through greater travel time and boat damage, especially where commercial operators cannot secure adequate mooring space.</li> <li>• High cost of applying/ re-applying for a resource consent, ongoing maintenance and monitoring costs.</li> <li>• Additional time and costs required to amend resource consent when the conditions need to be changed.</li> <li>• Inefficiently used space could be used for other economic uses e.g. other moorings.</li> <li>• Compliance and enforcement</li> </ul>

		costs for Council.
Social inc economic growth and employment	<ul style="list-style-type: none"> <li>• Provides certainty as to size and location during term of consent.</li> <li>• People have the opportunity to submit in support of opposition on the location of the consent.</li> </ul>	<ul style="list-style-type: none"> <li>• Under the current provisions unlawful moorings are being established. These moorings may be established at the detriment to the community.</li> <li>• Leads to greater use of public space than is needed through inefficiency's.</li> <li>• Can prevent other people establishing moorings, because of inefficient use of space.</li> </ul>
Cultural	<ul style="list-style-type: none"> <li>• Community needs meet with a preference to establish unauthorised moorings at convenient locations.</li> </ul>	<ul style="list-style-type: none"> <li>• Inefficient use of a public resource.</li> </ul>
<b>Option 2</b>		<ul style="list-style-type: none"> <li>• Create Mooring Areas and enable moorings to establish as a permitted activity subject to holding a mooring licence.</li> <li>• Manage moorings through mooring licences.</li> <li>• Harbourmaster determines where moorings can be located within mooring areas, and specifies the size of the boat and type of mooring that can be used.</li> </ul>
	<b>Benefits</b>	<b>Costs</b>
Environmental	<ul style="list-style-type: none"> <li>• Efficient use of the space -smaller area required for the same number of moorings.</li> <li>• Efficient mooring systems often have lower impacts on the seabed.</li> <li>• Visual impacts may decrease when moorings are concentrated in specific locations.</li> <li>• Efficient use of</li> </ul>	<ul style="list-style-type: none"> <li>• May cause additional seabed disturbance if moorings are moved.</li> <li>• Visual impact may be higher if a higher density of boats is located in one area.</li> <li>• Any adverse effects of moorings on the seabed and environment are concentrated in a smaller area.</li> </ul>

	<p>coastal marine area, reducing the need for moorings to locate in other locations.</p> <ul style="list-style-type: none"> <li>• Appropriate locations identified for moorings</li> <li>• Removal of unauthorised moorings.</li> </ul>	
Economic	<ul style="list-style-type: none"> <li>• Commercial operators may be able to locate closer to the site of their business.</li> <li>• Lower cost option for establishment of moorings</li> </ul>	<ul style="list-style-type: none"> <li>• Requires a plan change to implement.</li> <li>• Ongoing costs with administration and shifting of mooring blocks or changing mooring systems.</li> <li>• Annual fees. Costs associated with using an approved mooring system and maintaining it.</li> <li>• Need to identify owners and remove unauthorised moorings before re-allocating.</li> </ul>
Social inc economic growth and employment	<ul style="list-style-type: none"> <li>• low cost moorings should facilitate community use of the coastal marine area.</li> <li>• Potentially an increase in the manufacture and employment from constructing and servicing moorings</li> <li>• More boats can be moored safely within a defined area.</li> <li>• Waitlist to service demand.</li> <li>• Improved navigational safety for the mooring owner and the community through designed and maintained moorings.</li> <li>• Ability to limit the number of moorings held by one person.</li> </ul>	<ul style="list-style-type: none"> <li>• Consequential adverse effects associated with mooring areas e.g. increased parking, rubbish, pollution.</li> <li>• Less certainty as to location or duration of mooring.</li> <li>• Not everyone who wants a mooring will get a mooring.</li> </ul>

Cultural	<ul style="list-style-type: none"> <li>Increases the amount of space available for public use.</li> </ul>	
<b>Option 6</b>	Hybrid Option	Enable mooring holders within a mooring area to establish methods of self-management, including location, size of boat and type of mooring.
	Benefits	Costs
Environmental	<ul style="list-style-type: none"> <li>Flexible use of the space.</li> </ul>	<ul style="list-style-type: none"> <li>Use of the area may be less efficient. Existing mooring owners may not wish the expense of moving a mooring to accommodate additional moorings.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>There may be economies of scale e.g. single contract let for mooring inspections.</li> <li>Less cost to Council through self administration.</li> </ul>	<ul style="list-style-type: none"> <li>Groups decisions may incur costs among individuals.</li> <li>Additional cost to Council to administer mooring groups.</li> </ul>
Social inc economic growth and employment	<ul style="list-style-type: none"> <li>Enables the mooring owners to meet their needs.</li> </ul>	<ul style="list-style-type: none"> <li>The benefits to the mooring owners may not be benefits to the community.</li> <li>Disagreements.</li> <li>Consequential adverse effects associated with mooring areas e.g. increased parking, rubbish and pollution.</li> </ul>
Cultural	<ul style="list-style-type: none"> <li>Self-determination.</li> </ul>	
<b>Option 7</b>		<ul style="list-style-type: none"> <li>Provide for and encourage the use of more space efficient mooring systems.</li> </ul>
	Benefits	Costs
Environmental	<ul style="list-style-type: none"> <li>Reduces coastal sprawl of moorings.</li> </ul>	<ul style="list-style-type: none"> <li>Higher density of moorings within an area.</li> <li>Larger impacts e.g. more pollution, noise</li> </ul>
Economic	<ul style="list-style-type: none"> <li>May reduce the chance of boat damage with tighter swing circles between boats.</li> </ul>	<ul style="list-style-type: none"> <li>Cost associated with a plan change.</li> <li>Higher costs may be associated with more efficient mooring systems.</li> </ul>
Social inc.	<ul style="list-style-type: none"> <li>Potentially more</li> </ul>	<ul style="list-style-type: none"> <li>Less access to moorings due</li> </ul>



economic growth and employment	moorings available for public use. <ul style="list-style-type: none"> <li>Jobs arising from the need to manufacture and install different mooring systems?</li> <li>More commercial moorings available-more jobs.</li> </ul>	to potentially higher costs arising from the type of mooring system used. <ul style="list-style-type: none"> <li>Mooring systems may need to be purchased and installed by businesses outside of the district.</li> </ul>
Cultural	<ul style="list-style-type: none"> <li>Reduced area taken by moorings, greater area of the coastal marine area available for public use.</li> </ul>	<ul style="list-style-type: none"> <li>Higher density of moorings within a smaller area.</li> <li>Higher environmental impacts, e.g. pollution.</li> </ul>

**Risk of acting or not.**

Currently the mooring areas and areas with moorings are developed on an ad-hoc basis. The applicant for a mooring identifies a space and mooring system that suits. The resource consent is then granted or declined, with conditions, based on what was applied for. While it may be considered through the application, there is no current requirement to use efficient mooring system.

Currently there are moorings that are not being used in areas of high demand and unauthorised moorings are being established near areas of high demand because authorised moorings not available. Compliance is not being pursued in these or other areas because of the difficulty in identifying owners, the need for moorings and lack of alternatives. Where a mooring owner down sizes their boat and no longer requires a swing circle of the size they were granted there is no incentive to reduce the swing circle size consent because of the time and cost involved. Varying the location of a mooring in the resource consent also involves time and cost and is infrequently undertaken. It may also be in the best interest of the mooring owner to increase the separation distance between moorings to minimise the chance of damage to boats through overlap or to maintain a larger swing circle than required for resale reasons. The current provisions do enable or encourage efficient and flexible use of space within the coastal marine area.

If a system is introduced which requires efficient and flexible use, then this system is likely to be achieved at a greater cost, both administratively and through the occasional relocation of moorings. The active management of mooring space requires someone to drive the process.

**5.2.2. Promote and provide for the removal of obsolete, redundant or abandoned structures within the coastal marine area.**

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>No change – removal of structures defaults to a</li> </ul>
-----------------	------------	---

		<p>discretionary activity.</p> <ul style="list-style-type: none"> <li>Establish ownership on a case by case basis and require a resource consent to remove.</li> </ul>
	Benefits	Costs
Environmental	<ul style="list-style-type: none"> <li>Limited seabed disturbance as structures are ordinarily left in place.</li> </ul>	<ul style="list-style-type: none"> <li>Unwanted structures continue to take up coastal space.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>Potentially no cost to owners when structures are left in place.</li> <li>No plan change required.</li> </ul>	<ul style="list-style-type: none"> <li>Cost of identifying owner falls on Council/ratepayer.</li> <li>If ownership of structure is determined and no resource consent is granted for the structure then the cost of removal falls on the landowner.</li> <li>Cost of removal may fall on the government/community.</li> </ul>
Social inc. economic growth and employment	<ul style="list-style-type: none"> <li>Structures may have iconic, heritage values or associations.</li> </ul>	<ul style="list-style-type: none"> <li>Lost opportunity. Inability to use public space taken up by unwanted structures for other uses.</li> </ul>
Cultural	<ul style="list-style-type: none"> <li>Structures may have iconic, heritage values or associations.</li> </ul>	<ul style="list-style-type: none"> <li>Impacts on natural character.</li> </ul>
<b>Option 4</b>	Plan Change	<ul style="list-style-type: none"> <li>Provide for the landowner and other nominated organisations to remove structures as a permitted activity, subject to conditions.</li> <li>Require a resource consent where the conditions are not met.</li> </ul>
	Benefits	Costs
Environmental	<ul style="list-style-type: none"> <li>Enables the coastal marine area to be freed up for other values and uses.</li> </ul>	<ul style="list-style-type: none"> <li>Seabed disturbance</li> </ul>
Economic	<ul style="list-style-type: none"> <li>Enables the space to be used for other uses.</li> <li>No resource consent</li> </ul>	<ul style="list-style-type: none"> <li>Cost to owner, government or community to removal the structures,</li> </ul>

	required if, undertaken as a permitted activity.	which ordinarily are no removed.
Social incl. economic growth and employment	<ul style="list-style-type: none"> <li>Enables the coastal marine area to be freed up for other values and uses.</li> <li>May create employment through the removal of structures. May retain/attract the skills required for demolition.</li> </ul>	<ul style="list-style-type: none"> <li>Potential cost to government and community for the removal of the structure.</li> <li>Prevents the structure being re-purposed for other uses.</li> </ul>
Cultural	<ul style="list-style-type: none"> <li>Improved natural character</li> </ul>	

### Risk of acting or not

Uncertain ownership for some structures and the cost and time currently associated with gaining a resource consent, let alone the cost of removal has led to most structures being abandoned in the coastal marine area. Without a change to the provisions in the Plan, this situation is unlikely to change. By enabling the owner, Council or Central Government organisations to undertaken the work, as a permitted activity, is likely to increase the number of unwanted structures that are removed. However, these organisations may no more want to take on the work and costs than the owner, and the situation may not be that different from what currently occurs. There is also the risk that structures valued by the community e.g. local wharves, are removed as a permitted activity, which may not occur if a resource consent was required. It should be noted that the proposed permitted activity provisions exclude heritage structures with heritage values, and significant seabed disturbances (big structures).

### 5.2.1.3 Encourage the establishment of public moorings to enable the greatest use of space.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>No change.</li> <li>Resource consent required to establish any new mooring.</li> </ul>
	Benefits	Costs
Environmental	<ul style="list-style-type: none"> <li>Only moorings required are applied for.</li> <li>Individual assessment of effects on the environment.</li> </ul>	<ul style="list-style-type: none"> <li>Continued establishments of unlawful private moorings.</li> <li>In flexible ad-hoc development leading to inefficient use of public space.</li> <li>Proliferation of infrequently</li> </ul>

		<p>used moorings.</p> <ul style="list-style-type: none"> <li>• Seabed disturbance from mooring blocks dragging when used by members of the public with too bigger boats.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>• Private moorings can be bought and sold.</li> </ul>	<ul style="list-style-type: none"> <li>• Costly to apply for a resource consent, costly to amend conditions of consent.</li> <li>• Loss of opportunity for the space used by infrequently used moorings.</li> <li>• No exclusive use, wear and tear by other users.</li> </ul>
Social inc economic growth and employment	<ul style="list-style-type: none"> <li>• Use of privately owned moorings while not in use by mooring owner. No cost to the community.</li> <li>• Guaranteed use of a mooring by the mooring owner.</li> </ul>	<ul style="list-style-type: none"> <li>• Inequitable for those mooring owners who do the right thing and apply for a consent and maintain their mooring compared to those who unlawfully establish and use a mooring.</li> <li>• Need to establish more private moorings because insufficient public moorings are available.</li> </ul>
Cultural	<ul style="list-style-type: none"> <li>• Community tradition of unlawful moorings provides a low cost solution for mooring.</li> </ul>	<ul style="list-style-type: none"> <li>• Proliferation of moorings, effects on natural character.</li> </ul>
<b>Option 5</b>	Hybrid	<ul style="list-style-type: none"> <li>• Give preference to public moorings in Mooring Areas, under the allocation provisions of the Bylaw.</li> <li>• Encourage the establishment of public moorings through policy in the plan.</li> </ul>
	<b>Benefits</b>	<b>Costs</b>
Environmental	<ul style="list-style-type: none"> <li>• Potentially less infrequently used moorings.</li> <li>• Potentially a greater use of public space.</li> <li>• Less damage from anchoring.</li> </ul>	<ul style="list-style-type: none"> <li>• Inappropriate use by large boats can cause the mooring to be dragged.</li> </ul>

	<ul style="list-style-type: none"> <li>• More people can stay in an area, than if casually anchoring.</li> </ul>	
Economic	<ul style="list-style-type: none"> <li>• Potentially highest utility for the cost (more boats using the mooring).</li> <li>• Low cost access to moorings.</li> </ul>	<ul style="list-style-type: none"> <li>• Plan change/ Bylaw required.</li> <li>• Potentially lower utility for the cost (boat unable to permanently occupy).</li> <li>• Who pays and maintains.</li> </ul>
Social incl. economic growth and employment	<ul style="list-style-type: none"> <li>• Potentially makes the coastal marine area more accessible.</li> <li>• Provides a network of moorings for visiting public. Could enhance tourism.</li> </ul>	<ul style="list-style-type: none"> <li>• Uncertain access to a mooring.</li> <li>• Who pays for the installation and up keep.</li> <li>• Public moorings can be on-sold to individuals.</li> </ul>
Cultural		

Note: The method of allocating space within the coastal marine area is discussed further in the separate Section165H of the RMA report (yet to be drafted).

### Risk of acting or not

The provision of public moorings is likely to facilitate access to the coastal marine area by casual and transient users. It may also encourage the relinquishment of unauthorised moorings if no/low cost alternatives are provided. However, it may be difficult to determine what is a public mooring e.g. are boating club moorings public moorings? Who is likely to pay for the establishment of a mooring and how, if at all ? How would maintenance and safety matters be addressed if use is free? There would need to be clear information regarding the size and type of boat that could use of the mooring available. Anecdotally it appears that some consents for existing boating club moorings are not being renewed, for some of the above reasons. It may also be difficult to stop the preferable allocation of space for a public mooring being subsequently on-sold for a different purpose. These problems are resolvable.

### 5.2.2 Objective 2 Allocation of Coastal space: provide an alternative method of allocation of space for moorings, within defined mooring areas.

The method of allocating space within the coastal marine area is assessed in the separate Section165H report (yet to be drafted).

### 5.2.3 Objective 3: Strategic Planning:

5.2.3.1 Identify appropriate areas for permanent mooring and provide for moorings in those areas through the establishment of mooring areas.

Option 1	Status Quo	<ul style="list-style-type: none"> <li>No change –Currently three mooring areas.</li> <li>Resource consent required to establish new moorings.</li> </ul>
	Benefits	Costs
Environmental	<ul style="list-style-type: none"> <li>Areas for mooring have already been identified, all other applications are assessed on a case by case basis.</li> </ul>	<ul style="list-style-type: none"> <li>Most moorings are neither within a mooring area or hold resource consent.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>No additional plan change costs, mooring areas have been identified.</li> </ul>	<ul style="list-style-type: none"> <li>Resource consent required to establish all new moorings.</li> </ul>
Social inc. economic growth and employment	<ul style="list-style-type: none"> <li>Boat owners can either apply for a mooring in a predetermined area, subject to room.</li> </ul>	<ul style="list-style-type: none"> <li>Expensive to establish a new mooring through a resource consent process. High rate of unauthorised moorings and the numbers are increasing.</li> <li>One existing area is difficult to access, the other two suit specific boat types and are close or at capacity.</li> </ul>
Cultural		<ul style="list-style-type: none"> <li>One existing area is located in a significant natural area.</li> </ul>

<b>Option 3 &amp;4</b>	<b>Plan Change</b>	<ul style="list-style-type: none"> <li>• Assess existing mooring areas in the plan for appropriateness.</li> <li>• Establish new mooring areas in appropriate locations.</li> <li>• Policies set out the matters that need to be considered for future Mooring Areas.</li> <li>• Require the use of appropriate mooring systems, which reduce environmental impacts</li> </ul>
	<b>Benefits</b>	<b>Costs</b>
Environmental	<ul style="list-style-type: none"> <li>• Moorings located in appropriate areas.</li> <li>• Retirement of inappropriate areas in the current mooring areas.</li> <li>• Unlawful moorings removed, once low cost alternative provided. Public space freed up.</li> <li>• Criteria for identifying future suitable areas.</li> <li>• Lower environmental impact from moorings.</li> </ul>	<ul style="list-style-type: none"> <li>• Higher concentrations of moorings within a confined area.</li> <li>• Seabed disturbance arising from unlawful mooring removal.</li> <li>• May enable the establishment of moorings in more sensitive locations if a suitable system can be identified.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>• Positive benefits for commercial operators. Reduced fuel costs if boats can be moored close to business or area of operation.</li> </ul>	<ul style="list-style-type: none"> <li>• Cost of the plan change.</li> <li>• Use of alternative mooring systems may not be the least cost option.</li> <li>• Some existing authorised moorings will need to move.</li> <li>• Unauthorised moorings will need to be removed to enable lawful moorings to establish. The removal at least in part, will be at the cost of the community.</li> </ul>
Social inc economic growth and employment	<ul style="list-style-type: none"> <li>• Establishment of moorings more accessible to the community.</li> <li>• Industry through the</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction in the area available in one mooring areas.</li> <li>• Unauthorised moorings will be removed and the</li> </ul>

	manufacture and establishment of different mooring systems. Supports innovation.	use lost to owners. <ul style="list-style-type: none"> <li>The development of additional mooring areas may prevent other uses – lost opportunity.</li> </ul>
Cultural	<ul style="list-style-type: none"> <li>Reduced environmental impacts of moorings. Addresses issues raised by iwi</li> </ul>	<ul style="list-style-type: none"> <li>May enable the establishment of moorings in more sensitive areas.</li> </ul>

### Risk of acting or not

The Plan currently includes two mooring areas which are largely full and one area which is inappropriately located in a significant estuarine area. If the three areas are not reassessed then the current mooring areas are unlikely to meet demand, for in some instances the use at those locations is likely to impact on the environment and other users. By reassessing the existing areas, amending the boundaries where required, and identifying additional areas the Plan better meets the functional need to provide for moorings in the coastal marine area.

### 5.2.3.2

Prevent new coastal activities from adversely affecting moorings within the mooring areas. Prevent new coastal activities from adversely affecting existing network utilities within the coastal marine area.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>No change.</li> <li>First in first served.</li> </ul>
	Benefits	Costs
Environmental	<ul style="list-style-type: none"> <li>Siting is assessed on a case by case basis.</li> </ul>	<ul style="list-style-type: none"> <li>Inappropriately located structures may damage existing structures causing further seabed disturbance as either structure is repaired or re-sited.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>No plan change required.</li> </ul>	<ul style="list-style-type: none"> <li>Damage to existing structures, loss of income arising from down time/lost utilities.</li> </ul>
Social incl. economic growth and employment		<ul style="list-style-type: none"> <li>Damage or loss of public utilities when structures like moorings shift and damage the structure e.g. water, power.</li> </ul>
Cultural		
<b>Option 2</b>	Plan Change	<ul style="list-style-type: none"> <li>Include a policy which avoids the establishment of coastal activities within</li> </ul>



		<p>mooring areas where the activity will adversely affect the use of the mooring area for mooring.</p> <ul style="list-style-type: none"> <li>• Require a narrower setbacks from existing utilities; and</li> <li>• Require structures near utilities, to be correctly located.</li> </ul>
	<b>Benefits</b>	<b>Costs</b>
Environmental	<ul style="list-style-type: none"> <li>• Less damage to existing structures and seabed following repaired or re-siting.</li> <li>• Efficient use of the moorings area maintained.</li> </ul>	<ul style="list-style-type: none"> <li>• Greater occupation of space.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>• Reduced cost – repairs, loss of services e.g. power.</li> </ul>	<ul style="list-style-type: none"> <li>• Cost of the plan change</li> <li>• Additional cost in correctly locating the structure</li> <li>• Opportunity loss, only moorings can occur in mooring areas.</li> </ul>
Social inc. economic growth and employment	<ul style="list-style-type: none"> <li>• Reduced the likelihood of essential public infrastructure being damaged.</li> <li>• Integrity of mooring areas maintained.</li> </ul>	<ul style="list-style-type: none"> <li>• Potentially a greater area of public space is taken up by infrastructure.</li> </ul>
Cultural	<ul style="list-style-type: none"> <li>• Reduced potential for pollution from damaged subsurface wastewater pipes.</li> </ul>	<ul style="list-style-type: none"> <li>• Potentially a greater area of the coastal marine area is taken up by infrastructure.</li> </ul>

### Risk of acting or not

If the mooring areas are not protected then the risk is that other consents could be granted for the area. The presence of consented structures within the mooring area would make it difficult to achieve flexible or efficient use of the area. The boats would need to be arranged around the fixed consent location and it may be difficult to establish more efficient mooring systems because of the type or location of the consented structure. For this reason the intention is to not renew existing resource consents within mooring areas but give preference to existing mooring owners when allocating mooring licences.

Historically it has been difficult to locate and record the correct location of seabed structures. This is less of a problem now with GPS systems but there is still a risk that the structure will shift or be moved during installation. Unforeseen events have also led to other coastal structures shift e.g. mooring blocks and damage adjoining infrastructure. There is a real risk of damage to public infrastructure (with significant implications e.g. Mapua three water pipes) when sufficient set back distances and correct locations are not imposed.

## 5.2.4

### Objective 4: Navigation and Safety:

Require all moorings to be located, constructed and maintained to a standard that supports the navigational safety of all coastal users. Establish Mooring Areas in locations which do not effect recognised anchorages or maritime routes within the coastal marine area.

Option 1	Status Quo	<ul style="list-style-type: none"> <li>• No change.</li> <li>• Mooring standards set out in the resource consent</li> <li>• Mooring areas already established in the plan.</li> <li>• History of unlawful moorings</li> </ul>
	Benefits	Costs
Environmental	<ul style="list-style-type: none"> <li>• Effects of a proposed mooring on anchorages or maritime routes can be assessed on a case by case basis</li> </ul>	<ul style="list-style-type: none"> <li>• Little or no control over mooring type and effect on the seabed.</li> <li>• Unlawful moorings may established in areas which affect navigation and safety.</li> <li>• Potentially inefficient use of the coastal marine area through the establishment of unlawful moorings leading to cumulative adverse effects on the movement of boats.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>• No need to undertake a plan change.</li> </ul>	<ul style="list-style-type: none"> <li>• Disparity in costs between lawfully established moorings and unlawful moorings encourages unlawful moorings.</li> <li>• Need to provide</li> </ul>

		information on the effects on anchorages or maritime routes with every application.
Social inc. economic growth and employment	<ul style="list-style-type: none"> <li>The type, cost and location of moorings specific to needs of mooring owner.</li> </ul>	<ul style="list-style-type: none"> <li>While consented moorings are built to a certain standard and regularly maintained, the majority of moorings which are unlawful may not and often cause navigational safety issues when they fail.</li> <li>Some existing areas and the existing moorings e.g. Mapua may be having an impact on other boats.</li> </ul>
Cultural		<ul style="list-style-type: none"> <li>Potential for inappropriately located unlawful moorings.</li> </ul>
<b>Option 2 &amp; 3</b>	Hybrid	<ul style="list-style-type: none"> <li>Identify appropriate locations for mooring areas in the plan.</li> <li>Manage the construction and maintenance of moorings through a navigation and safety bylaw.</li> <li>Re-assess existing mooring areas for effects on recognised anchorages or maritime routes, amend if needed.</li> <li>Establish additional mooring areas in locations that do not effect recognised anchorages or maritime routes.</li> </ul>
	<b>Benefits</b>	<b>Costs</b>
Environmental	<ul style="list-style-type: none"> <li>Moorings located in environmentally appropriate areas.</li> <li>Appropriate mooring</li> </ul>	<ul style="list-style-type: none"> <li>Permanent moorings could displace of occasional anchoring in some areas.</li> </ul>

	<p>systems used for the location.</p> <ul style="list-style-type: none"> <li>• Less likely for seabed disturbance to occur through the provision of moorings and use of appropriate mooring systems.</li> <li>• In some locations the reduction in unlawful moorings will increase the space for occasional anchorage e.g. Motueka</li> </ul>	<ul style="list-style-type: none"> <li>• Potentially high density and effects within the mooring areas.</li> <li>• The increased space for lawful moorings in some locations may be at the expense of occasional anchorage e.g. Otuwhero and Kaiteriteri.</li> <li>• Increased anchoring may increase seabed damage.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>• Less damage arising from failed moorings and drifting boats.</li> </ul>	<ul style="list-style-type: none"> <li>• Plan change required.</li> <li>• Cost of identifying and removing unlawful moorings located in recognised anchorages or maritime routes. However, this cost remains, irrespective of the plan change.</li> </ul>
Social inc. economic growth and employment	<ul style="list-style-type: none"> <li>• Public access and navigational safety maintained.</li> <li>• Maintained anchorages and maritime routes.</li> </ul>	<ul style="list-style-type: none"> <li>• May reduce informal anchoring potential in some areas.</li> <li>• Existing unlawful moorings will need to be removed, however this needs to occur anyway.</li> </ul>
Cultural	<ul style="list-style-type: none"> <li>• Known cultural sites are avoided.</li> </ul>	<ul style="list-style-type: none"> <li>• Mooring areas are most likely located in historic waka landing areas.</li> <li>• Inability to submit on moorings within mooring areas.</li> </ul>

### Risk of acting or not

The current issue is the high number of unlawful moorings, which in some occasions will be located in areas which cause a navigational hazard. Unlawful moorings are often not maintained and may be substandard causing a navigational hazard when the mooring fails. The risk of not providing for permanent moorings, in appropriate places, built to a suitable standard, with required maintenance is continuance of the navigational hazard from unlawful moorings. The Harbourmaster has reactive powers enabling the removal some structures, but these powers are unlikely to encourage appropriate moorings in appropriate places.

### 5.2.4.3

Enable the removal of obsolete, redundant or abandoned structures within the coastal marine area.

Option 1	Status Quo	<ul style="list-style-type: none"> <li>No change.</li> <li>Establish ownership and request removal.</li> <li>Some minor structures can be removed under the RMA as a permitted activity.</li> </ul>
	Benefits	Costs
Environmental	<ul style="list-style-type: none"> <li>Minimal seabed disturbance when structures left in place.</li> </ul>	<ul style="list-style-type: none"> <li>Abandoned, obsolete and unwanted structures likely to remain in-situ.</li> <li>Inefficient use of public space.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>No plan change required.</li> <li>Low cost, not many structures are removed.</li> </ul>	<ul style="list-style-type: none"> <li>Lengthy and expensive task to identify owners under MACA regulations, particularly where the structure is historic and long since abandoned.</li> <li>Costly to apply for resource consents and remove structures. Uncommon under the existing provisions for any coastal structure to be removed. It should be noted that under the recent changes to the RMA, the removal of some structures is now provided for as a permitted activity.</li> <li>Coastal structures with unknown ownership default to the Crown (DOC). The cost of gaining the resource consent and removing the structure is restricted to DOC unless another</li> </ul>

		arrangement for funding is made.
Social inc. economic growth and employment	<ul style="list-style-type: none"> <li>• Low probability that the community/tax payers will need to pay for the removal of unwanted structures.</li> </ul>	<ul style="list-style-type: none"> <li>• Unwanted or needed structures remain in public space. Difficult to use the space if desired for a different use when it is difficult to identify the owner and to pay for the consent and removal.</li> </ul>
Cultural		
<b>Option 4</b>	<b>Plan Change</b>	<ul style="list-style-type: none"> <li>• Provide for the landowner and other nominated organisations to remove structures as a permitted activity, subject to conditions.</li> <li>• Require a resource consent where the conditions are not met.</li> </ul>
	<b>Benefits</b>	<b>Costs</b>
Environmental	<ul style="list-style-type: none"> <li>• Provides for the removal of unwanted coastal structures (subject to conditions) without the time and expense of seeking a resource consent.</li> <li>• Enables the coastal marine area to be freed up for other uses including navigation and anchoring.</li> </ul>	<ul style="list-style-type: none"> <li>• Seabed disturbance that would not have occurred should the structure be left in place.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>• Removes the need to apply for a resource consent in most cases - cheaper</li> </ul>	<ul style="list-style-type: none"> <li>• Cost of plan change</li> <li>• The cost of structure removal is likely to pass on to the community/tax payers.</li> </ul>
Social inc. economic growth and employment	<ul style="list-style-type: none"> <li>• Space occupied by unwanted abandoned structures becomes available for other public uses.</li> </ul>	<ul style="list-style-type: none"> <li>• Enables person other than the landowner to remove structures.</li> <li>•</li> </ul>
Cultural		

## Risk of acting or not

Uncertain ownership for some structures and the cost and time currently associated with gaining a resource consent, let alone the cost of removal has led to most structures being abandoned in the coastal marine area. Abandoned structures left within the coastal marine area can make it more difficult to navigate may reduce the area available for anchorage. Abandoned moorings are not maintained and can pose a safety risk when they fail either through use by another person or drifting gear. The Harbourmaster has the powers to remove structures where they pose a risk.

## 5.2.5

Objective 5: Integrated Planning.

3.2.5.1 Support the requirements of the Marine and Coastal Area (Takutai Moana) Act 2011 by introducing provision which enable a record of ownership of all coastal structures to be kept.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>No change.</li> <li>Record kept of resource consent holders.</li> <li>Acquire details of ownership through other means.</li> </ul>
Benefits		Costs
Environmental		
Economic	<ul style="list-style-type: none"> <li>Currently no additional costs (little work being undertaken).</li> </ul>	<ul style="list-style-type: none"> <li>Plan change required</li> <li>Long and difficult process of establishing the ownership of structures under the MCA regulations. Limited work undertaken since the passing of the Act in 2011.</li> </ul>
Social inc. economic growth and employment		<ul style="list-style-type: none"> <li>With ownership unknown it is difficult to require structures to be maintained.</li> </ul>
Cultural		
<b>Option 3</b>	Plan change	<ul style="list-style-type: none"> <li>Record kept of resource consent holders.</li> <li>Retain existing permitted activities and</li> </ul>

		require ownership details as a condition of consent.
	Benefits	Costs
Environmental	<ul style="list-style-type: none"> <li>Makes the management and maintenance of all coastal structures easier to achieve.</li> </ul>	
Economic		<ul style="list-style-type: none"> <li>Additional administrative cost.</li> </ul>
Social inc. economic growth and employment		<ul style="list-style-type: none"> <li>Uncertainty, if ownership details not known, overlooked, then the permitted activities lose the permitted activity status.</li> </ul>
Cultural		

### Risk of acting or not

The permitted activity status will be lost if ownership details are not known. Long term existing permitted structures may as a consequence become unlawful, unless details are provided or consent is granted. Owners of existing permitted activity structures may not be aware of the proposed change and Council may not be able to identify owners. However, in the end, ownership details are required however, Council might acquire them.

### 5.2.5.2

Authorise key public structures on the foreshore and coastal marine area adjacent to the Abel Tasman National Park, where appropriate, to give effect to policy in the Abel Tasman Scenic Foreshore Reserve Management Plan regarding unauthorised structures.

<b>Option 1</b>	Status Quo	<ul style="list-style-type: none"> <li>No change.</li> <li>Resource consent required for those structures not listed as permitted.</li> </ul>
	Benefits	Costs
Environmental		
Economic	<ul style="list-style-type: none"> <li>No plan change required.</li> </ul>	<ul style="list-style-type: none"> <li>Less cost in applying/reapplying for resource consents for essential public structures.</li> <li>Landowners will need to remove the finger jetty</li> </ul>



Social inc. economic growth and employment		<ul style="list-style-type: none"> <li>Loss of the access provided by the finger jetty and benefits from the water pipe to the boating community.</li> </ul>
Cultural		
<b>Option 2</b>	Plan change	<ul style="list-style-type: none"> <li>Give effect to the management plan policies in the establishment of mooring areas.</li> <li>Update Schedule 25A to include some public structures as permitted activities.</li> </ul>
	Benefits	Costs
Environmental	<ul style="list-style-type: none"> <li>Integrated management of the scenic foreshore of Abel Tasman National Park.</li> </ul>	
Economic	<ul style="list-style-type: none"> <li>Lower costs, resource consents no longer required for structures included Schedule 25B</li> </ul>	<ul style="list-style-type: none"> <li>Plan change required.</li> </ul>
Social inc economic growth and employment	<ul style="list-style-type: none"> <li>Finger jetty and water pipe and other currently unconsented structures continue to provide community benefit</li> </ul>	
Cultural		

### Risk of acting or not

There are no particular risks from these changes not occurring, other than the public benefit from the finger jetty and water pipe may be lost if no resource consent is granted for the structures and the structures are required to be removed.

## 5.3 Reasons for Deciding on the Provisions.

This section will be completed following consideration of the feedback on the draft plan change.

## 5.4 Iwi Advice and the Response.

Iwi were given the opportunity to provide feedback on the issues and options paper in 2014. Iwi have been kept informed during the drafting of the plan change and Bylaw and were given the opportunity to provide feedback at the Iwi Working Group Hui (13 February 2017). Representatives from Te Atiawa, Ngati Kuia, Ngati Apa and Manawhenua Ki Mohua were present. During the Hui there was concerns raised over the cumulative effects of multiple moorings.

Iwi were further invited to meet with Council staff, and Council staff met with Ngati Koata on the 24 May 2017, Ngati Apa on the 31 May 2017, Te Atiawa on the 6 June 2017 and Te Runanga o Ngati Kuia on the 8 June 2017.

Te Atiawa suggested that in return for the mooring areas there should be prohibitions in other areas/ outside the mooring areas<sup>59</sup>. In further correspondence,<sup>60</sup> Te Atiawa raised concerns about the proliferation and use of moorings in general across Te Tau Ihu. Te Atiawa accepted the reports by Davidson and Melville and acknowledged that the moorings areas have been modified as a result. They also accepted that the mooring areas should manage the proliferation of moorings providing that the assessment criteria for discretionary moorings are suitably rigorous. They also accepted that moorings were prohibited in some areas.

Te Atiawa further requested mooring owners minimise their impact on the environment and be incentivised to upgrade to the best technology. They would also like the justification for the moorings existence, tied into the actual consent/permission so that when the justification no longer exists, the mooring is removed.

In response to the matters originally raised by Te Atiawa, there was a level of acceptance by Te Atiawa that the provisions as drafted met their concerns. With regard to the two matters raised regarding the use of technology to minimise the impact on the environment and the request to tie mooring resource consents to need, the plan change was amended in part. In January 2018, Cawthron Institute produced a report for Marlborough District Council on the *Effects of Moorings on Different Types of Marine Habitats*<sup>61</sup>. The report details the effects of different mooring systems on the seabed and contains recommendations for different types of mooring systems in different environments.

Te Atiawa's suggestion was considered beneficial. There is currently no limitations on the conditions placed on moorings as a discretionary activity and there is a long list of matters currently included in the Plan which cover most aspects raised by Te Atiawa. In particular, matters may include the "effects on the environment, efficient use of space, duration of consent, circumstances when removal will be required, and the relationship with tenure,...". Despite this an additional matter (Rule 25.1.2.3.11

---

<sup>59</sup> File note for meeting

<sup>60</sup> Email dated 12/03/2018 from B Bronson

<sup>61</sup> Appendix H

(d)) has been proposed in the plan change to make it clear that consideration should be given to mooring type.

The bigger issue of whether structures should be tied to particular users or properties is important, should be considered through the regional policy statement review and regional coastal plan review in 2021. There is however, currently no reason why this issue could not be considered and addressed through a condition in a resource consent, should it be required.

# APPENDICES

***Appendix A***

**TASMAN DISTRICT COUNCIL**

Tasman Resource Management Plan

***Draft Plan Change No. ##***

***Explanatory Statement***

#  
#  
#

***Appendix A(2)***

**TASMAN DISTRICT COUNCIL**

Consolidated Bylaw

***Chapter #***

***Mooring Area Bylaw***

***Appendix B: Biological Report in relation to proposed mooring areas located between Waimea Inlet and Whanganui Inlet: biological features, habitats and issues.***

***Appendix C: Assessment of shorebird use of proposed boat mooring sites at Otuwhero/Marahau and Motueka***

***Appendix D: Assessment of the Impacts of the Proposed Coastal Plan change on Historic Heritage in Tasman.***



***Appendix E: Seabed survey of mooring areas, Mapua Inlet***

***Appendix F Assessment of Demand of Moorings in the Proposed Mooring area and the impact on recreation and navigation.***

***Appendix G: Visual Natural Character and Landscape effects Assessment.***

***Appendix H: Effects of Mooring on Different types of Marine Habitat.***