



# ***Manawatū Estuary Management Plan***

***2015 – 2025***



Prepared by the Manawatū Estuary Management Team in partial fulfilment of Ramsar Convention requirements.

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## 1 INTRODUCTION

The International Convention on Wetlands of International Importance was signed at Ramsar, Iran, on 2 February 1971.

The mission of the Ramsar Convention is “the conservation and wise use of all wetlands through local, regional and national actions and international cooperation as a contribution towards achieving sustainable development throughout the world.”

Under the Ramsar Convention, each contracting party (of which New Zealand is one) “shall designate suitable wetlands within its territory for inclusion in a List of Wetlands of International Importance”. At the end of 2014, a total of 2,186 wetlands had been declared Ramsar sites around the world, with a total area of 208,449,277 ha. New Zealand’s contribution to this total is six wetlands, with a total area of approximately 55,000 ha.

In July 2005 the Manawatū Estuary was declared a Wetland of International Importance, following a nomination from the Royal Forest and Bird Protection Society with support from the Manawatū Estuary Trust. The Ramsar status of the Manawatū Estuary acknowledges the ecological importance of the area as a site for wading birds, its vegetation, and landforms. The Manawatū Estuary is one of the largest estuaries in the lower North Island.

In 2006 a Manawatū Estuary Management Team, comprising representatives from the Department of Conservation, Horizons Regional Council, Horowhenua District Council, the Manawatū Estuary Trust, and iwi, was established to coordinate efforts to protect and enhance the site. One of the first tasks for this Team was the preparation of a management plan as recommended by the Ramsar Convention. The first management plan covered a five year period from 2007-2012. A review of the first management plan was commenced in 2012 and a revised plan has been prepared (as set out below).

The 2015-2025 management plan describes how the project team will work together to build upon the works started under the initial plan, and what new actions will be undertaken. It is hoped this revised plan, with its new direction and objectives, will provide statutory managers and potential funders with the confidence to increase their levels of support and resourcing available for managing the site.



## 2 PLAN PURPOSE AND SCOPE

The 2007-2012 management plan was prepared to:

- Partially fulfil the Ramsar convention requirements (Article 3.1) with a management plan that sets out the values of the site and the objectives/actions required to maintain/enhance those values;
- Clarify the responsibilities of the statutory managers (i.e. Department of Conservation, Horizons Regional Council and Horowhenua District Council), in what is a very complicated part of the region in terms of ownership, management areas, and legal responsibilities;
- Record and summarise what information exists about the Estuary, and what actions are required to fill any knowledge gaps (there is relatively little recorded information on the habitats and species of the Estuary); and
- Set-out what on-the-ground actions will be continued and/or initiated, based on the available information, to maintain/enhance/promote the estuary values.

A large proportion of the actions listed in the initial management plan focussed on improving understanding of Manawatū Estuary values, features and threats. The intention being this enhanced knowledge would inform future management plans and refine and update the various actions they contained.

Whilst good progress was achieved against several actions listed in the original management plan, for various reasons many of the actions targeting the collection of foundation knowledge about the Estuary have not been completed. Rather than wait until this information becomes available, the 2015-2025 management plan sets out the general approach and direction for future management of the Estuary, with a new vision, objectives, targets and actions. The management plan retains its focus on maintaining and improving the ecological condition of the Estuary.



Implementation of the 2015-2025 management plan will rely on annual action planning to identify the specific tasks to be completed each year, given available resourcing. Annual work programmes will be refined as more foundation information becomes available, and the costs of undertaking work can then be more accurately determined. A 10-year plan lifespan enables long-term projects to be developed and supported. The management plan will be reviewed two-yearly, with a focus on those sections of the plan the foundation knowledge and/or monitoring indicate require updating.

An approach based on annual work planning and regular reviews provides the management team with the flexibility necessary to ensure the plan remains relevant, and an ability to more readily respond to changing circumstances e.g. personnel or funding level changes. This approach also ensures that agencies will regularly review their obligations and commitments to the site.

The Manawatū Estuary management plan is a non-statutory document, meaning it cannot compel an organisation or individual to undertake an action, nor does it have the ability to regulate or modify current activities in the Estuary. Any change to the use of the Estuary, recommended as a result of monitoring undertaken as part of a management plan, can only be achieved through changes to Acts of Parliament, regional/district plans, district council strategies, or via the resource consent process. All of these processes require some degree of public consultation, thereby providing potentially affected parties an opportunity to become engaged around any proposed change.



### 3 MANAWATU ESTUARY

#### 3.1 Location

The Manawatū River enters the Tasman Sea south of Foxton Beach township, on the west coast of the lower North Island. The estuary it forms extends inland from the coast to the Whirikino Cut near Foxton township, a distance of approximately 4km (Map 1). The Ramsar site is approximately 200 ha in extent, and includes areas of beach, sand dune, salt marsh, mud flat, and river channel. The total site covers an area of 558 ha, made up of 386 ha of land (dry land and land that is tidally flooded) and 172 ha of river channel.

#### 3.2 Ownership

No one organisation or individual has sole actual or vested ownership of the Ramsar site. The bulk of the site is unallocated riverbed or foreshore (“seabed” under the Foreshore and Seabed Act 2004), with the remainder a mixture of Crown, district council and private land (Map 1). The status of some smaller land parcels adjoining the Estuary is uncertain. Cadastral information can be unreliable in such environments due to the fluctuating position of the shoreline and river and review of the Ramsar site boundary in the future may be required.



**Map 1:** Manawatū Estuary, showing the Ramsar site boundary and land tenure

### 3.3 Values

The Manawatū Estuary is one of the largest estuary and wading bird feeding grounds in the lower half of the North Island, and retains a high degree of naturalness and biodiversity. The Estuary was designated a Wetland of International Significance on the basis of its various geomorphology, fauna, flora, cultural and social values. The values of the Manawatū Estuary are described in greater detail in the 2007-2012 Management Plan and also within the [Ramsar Information Sheet](#) for the Estuary.

#### 3.3.1 Geomorphology

The Manawatū Estuary is a dynamic part of the coastal environment comprising mudflat, saltmarsh, and dunes. The extent of the mudflats is tide dependent, ranging from non-existent during high tides, to more than 100 ha in size during very low tides.

There are approximately 140 ha of saltmarsh within the estuary, the largest of which is 100 ha in extent (Fernbird Flat).

The dynamic dune field on the northern side of the river mouth covers an area of approximately 50 ha. The highly mobile dunes are fed by sand that is moving southwards along the coast. Expansion of the dune field causes the river mouth to move southwards, requiring large floods to realign the mouth.





### 3.3.2 Flora

The vegetation assemblages of the Manawatū Estuary reflect the geomorphic units present – mudflat, saltmarsh, and dune. Fifty species of indigenous and exotic species of plant have been recorded in the estuary. Of these, eight are nationally threatened or naturally rare plants. The flora of the Estuary is predominantly indigenous species, but exotic weed species are present and pose a significant risk to future functioning of the site (refer Threats below).

### 3.3.3 Fauna

The Manawatū Estuary supports a wide range of animal species on a permanent, seasonal, or temporary basis.

#### **Birds**

The Manawatū Estuary has one of the highest bird diversities of any site in New Zealand. One hundred and twenty-one bird species have been recorded in the Estuary and immediately surrounding lands. Of these, 28 bird species are considered nationally critical or nationally threatened. The Manawatū Estuary is renowned for the large number of wading birds it attracts at different times of the year for breeding, overwintering, and storm protection. Amongst the wading birds are godwits, wrybills and royal spoonbills. At times, the Estuary can be hosting up to 20% of the world's wrybill population.

#### **Fish**

Many of New Zealand's indigenous freshwater fish migrate between freshwater habitats and the sea as part of their lifecycle. Located at the intersection between these two aquatic environments, estuaries provide critical migration routes and spawning/feeding grounds. A total of 24 fish species have been recorded for the Manawatū Estuary, including indigenous and exotic species, and marine wanderers such as kahawai and mullet. Four of these species are listed as nationally threatened.

#### **Invertebrates (including Shellfish)**

Previous surveys have identified a large number of invertebrates in the Estuary and surrounding lands, and at high densities. However, a comprehensive species list has never been compiled. The endangered katipo spider was once common in the dunes at the mouth of the Estuary.

Little has been recorded about the shellfish population of the Manawatū Estuary and immediately adjacent coastline. However, historically shellfish were abundant as evidenced by the number and size of shell middens in the area. Shellfish are highly valued for cultural harvest and recreational use.

#### **Mammals and reptiles**

There is no record of indigenous mammals or reptiles being present in the Manawatū Estuary.



Whitebait/Inanga. Stephen Moore, LCR

### 3.4 Cultural Values

Water and water bodies such as rivers, lakes and wetlands, have their own mauri, which is important for Tangata Whenua to protect from pollution, degradation and damage. Rivers, lakes and wetlands are also key elements in the identity, whakapapa and mana of hapu.

The Manawatū River and estuary are of considerable significance to a number of iwi and hapu including Ngāti Raukawa, Rangitāne, Muaūpoko and Whakatere. The river is seen as a physical connection to the spirit world and is considered tapu. The estuarine area provided sustenance (e.g. tuna and shellfish) and materials (e.g. flax and raupō).

### 3.5 Social Values

Many people live and work within close proximity of the Estuary, and Foxton Beach is a popular destination for holiday-makers and day-trippers. The Estuary is used extensively for recreational activities such as fishing, whitebaiting, walking, bird-watching, boating, duck shooting, motorboat sports, kitesurfing, and four-wheel driving. Many people also enjoy the ever-changing views in response to the tide and weather.

Schools, universities and research institutes have all made use of the Estuary and surrounding land for education and research purposes.



### 3.6 Threats

Although the Manawatū Estuary retains a high degree of naturalness, the site is far from pristine. The site has been modified through the actions of historical land use changes (within the wider Manawatū catchment and adjacent to the site), and river engineering works (e.g. the Whirokino Cut). The Estuary is likely to have responded and adjusted to these impacts by now, however, there are a host of contemporary impacts and actions that are, or have the potential to, negatively impact on the health of the Estuary:

- Management – activities such as reopening of the Foxton Loop, additional flood protection and construction of seawalls (in response to sea level change) could impact on the dynamic natural processes occurring in the Estuary, such as migration of the river mouth. Other than returning a residual flow to Foxton Loop, no such proposals are currently being contemplated.
- Human disturbance – human activities such as walking (particularly with uncontrolled dogs), and use of motorised vehicles and boats have the potential to disturb feeding, resting and nesting birds, and fragile vegetation. This threat has been partially addressed through the erection of signage, fencing and bollards, and the efforts of the Police and Foxton Beach Wardens.
- Weeds – invasive plants are the most significant and immediate threat to the Estuary. The most notable plant threats are spartina, marram, sharp rush and tall fescue. All are transformer weeds that modify their environments at the exclusion of indigenous species. Many exotic plants are present in the wider landscape and could become established in the Estuary, especially with fly-tipping of garden waste still occurring. The presence and extent of weed species in the site remains poorly understood. Spartina has been the focus of a significant control effort in recent decades.
- Pest animals – the Estuary hosts a large number of pest species, including feral cats, mustelids, hedgehogs, rats, rabbits, and possums. Pest animal impacts include grazing and predation (of eggs, nestlings and adults). Pest numbers are unknown, but the impact of each pest is likely to be different and highly variable across the different parts of the Estuary. The most vulnerable areas are the dunes and Fernbird Flat. The landscape surrounding the Estuary has the potential to support large populations of pest animals. A pest trapping programme has been underway in the Fernbird Flat and surrounding farmland area, and along the coastal foredune north of Foxton Beach, for several years.
- Stock – stock (mainly cattle) sometimes graze the Fernbird Flats area where there is potential to alter the indigenous vegetation assemblage, introduce weeds, and trample nests. The number of grazing events per year has declined since the Estuary became a Ramsar site.
- Water quality – the water quality of the Manawatū River is quite degraded, in terms of its nutrient, sediment and bacteria loads, as a result of upstream land uses and point source discharges. What impact this has had, or is having, on the flora and fauna of the Estuary is unknown. Poor water quality may have an impact on shellfish and other aquatic species. Improving the health of the Manawatū River is the aim of the Manawatū River Leaders Forum and associated Accord Action Plan. The future health of the Estuary will be indicative of the success of the Accord.
- Contaminated sites – there is a former rubbish dump located within the coastal dunefield. At present it is capped and covered by the dunes, but if it becomes exposed it could become a pollution and litter risk.

## 4 VISION, OBJECTIVES, TARGETS AND ACTIONS

The vision guiding the management team's efforts to protect and enhance the Manawatū Estuary Ramsar site over the next 10 years (2015-2025) is:

For the Manawatū Estuary Ramsar site to be sustained, known, respected, and enjoyed as a regional treasure and estuarine ecosystem of international significance.

Within this context, the key elements in the vision mean:

- Sustained - the ecology of the site is protected/enhanced
- Known - awareness and recognition of the site and its values improves
- Respected - site managers and users, including upstream contributors, respect all site users and values
- Enjoyed - sustainable use and enjoyment of the site, its resources and facilities increases.

To give effect to this vision, the management team has agreed to carry out the following functions and operate as follows:

- advocate for additional support, resources and funding to deliver on the management plan, particularly as more foundation knowledge becomes available
- advocate for protection/enhancement of the Ramsar site through resource consent and plan development processes, and via the Manawatu River Leaders' Forum
- meet in March each year to review the current year's progress, and discuss and agree the work programme for the coming financial year (starting 1 July)

- meet in October each year to coordinate activities over the busy summer period
- meet at other times as required to discuss issues as they arise
- create a central repository for information relating to the Ramsar site and its surrounds to improve information sharing amongst the group, and with the wider community
- monitor and report progress against the management plan and work programmes
- fully meet the Ramsar reporting requirements
- undertake 2-yearly reviews of the management plan, starting in March 2017
- resolve unallocated Crown land issues, whilst respecting Treaty of Waitangi claim proceedings
- explore opportunities to expand the Ramsar site into surrounding areas e.g. Foxton Loop
- explore opportunities to purchase the privately owned portion of Fernbird Flat

The objectives, targets and actions the Manawatū Estuary management team will be working to achieve during 2015-25 are set out in Table 1. Like its predecessor, the 2015-2025 management plan has an emphasis on the collection of foundation knowledge to inform the development of activity plans, and estimates for the cost of implementation. Annual works programmes will give effect to these activity plans. Work programmes will be tailored to reflect the levels of resourcing and funding available for delivery.

Once the foundation knowledge becomes available it will be possible to more accurately calculate the cost of delivering the Manawatū Estuary management plan's vision, objectives, and targets.

**Table 1: The objectives, targets, and actions the Manawatū Estuary management team seeks to deliver during 2015-2025.**

Objectives	Targets	Actions
<p><b>The ecology of the site is protected and enhanced</b></p>	<p>Pest plant densities and distributions are significantly reduced from current levels</p>	<p>Map current pest plant densities and distribution, including invasive indigenous (but not local) species</p> <hr/> <p>Develop a weed activity plan with clear objectives for each pest plant (i.e. eradicated, zero-density, surveillance etc), the methods to be used, the timeframes over which these objectives will be achieved, and the costs of implementation</p> <hr/> <p>Implement the weed activity plan via annual work programmes that cover:</p> <ul style="list-style-type: none"> <li>• weed control works</li> <li>• monitoring and reporting</li> <li>• education</li> </ul>
	<p>Animal pest densities are significantly reduced from current levels</p>	<p>Develop a pest animal activity plan with clear objectives for each pest animal, the methods to be used, the timeframes over which these objectives will be achieved, and the costs of implementation. It is recognised community support is required for specific control options.</p> <hr/> <p>Implement the animal pest activity plan via annual work programmes that cover:</p> <ul style="list-style-type: none"> <li>• animal control works</li> <li>• monitoring and reporting</li> <li>• education</li> </ul>
	<p>Existing indigenous flora species remain represented within the site, and their distribution is expanded where possible</p>	<p>Identify the flora species at risk of loss from the Estuary, and the drivers of that loss.</p> <hr/> <p>Develop a flora activity plan with clear objectives for each species at risk of being lost, the methods to be used, the timeframes over which these objectives will be achieved, and the costs of implementation.</p> <hr/> <p>Implement the flora activity plan via annual work programmes that cover:</p> <ul style="list-style-type: none"> <li>• protection/enhancement works</li> <li>• monitoring and reporting</li> <li>• education</li> </ul>
	<p>Existing habitat for non-migratory and migratory species is protected and expanded where possible</p>	<p>Develop a habitat activity plan with clear objectives for each habitat area, the methods to be used, the timeframes over which these objectives will be achieved, and the costs of implementation. The habitat activity plan will cover native birds, fish and shellfish.</p> <hr/> <p>Implement the habitat activity plan via annual work programmes that cover:</p> <ul style="list-style-type: none"> <li>• habitat protection/enhancement works</li> <li>• monitoring and reporting</li> <li>• education</li> </ul>

	Shellfish numbers increase significantly over current levels	Identify the water quality limits for shellfish and other vulnerable aquatic species in Manawatū Estuary Advocate for water quality and river health improvements via the Manawatū River Leaders' Forum
	The geomorphological and ecological character of the sand dunes improves	Support, and expand if possible, the current erosion control, planting, and education efforts in the coastal dunefields
	Knowledge of the Estuary's ecology improves	Undertake a knowledge gap analysis of the Ramsar site's ecology. Likely priorities include: <ul style="list-style-type: none"> <li>• pest fish presence and impact</li> <li>• invertebrate presence, densities and distributions</li> <li>• water quality</li> <li>• identification and monitoring of high risk sites (e.g. landfills)</li> </ul> Prepare a knowledge activity plan to address the identified knowledge gaps Implement the knowledge activity plan via an annual work programme. The plan can be implemented by the management team, or through third parties such as community groups, universities and research organisations.
<b>Awareness and recognition of the site and its values improves</b>	Every visitor to the region is aware of the Manawatū Estuary	Work with regional promotion agencies and tourism operators to develop and distribute promotional material about the site and the experiences it offers
	Visitors have easy access to information about the site	Develop and install additional signage to explain the site's significance and values, the experiences on offer, and provide guidance on appropriate behaviours and use
	An exciting and engaging event is held in or near the Estuary every month	Develop and promote an annual calendar of events including conservation week, world wetlands day, matariki, celebration of Ramsar milestones, the arrival/return of species, cultural celebrations, and recreation events.
<b>Site management respect all site users and values</b>	Tangata whenua are fully engaged in management of the site	Tangata whenua are active members of the management team and participate in the development and implementation of annual work programmes
	Mana whenua stories and beliefs are communicated	Explore opportunities to share cultural values, beliefs and legends with mana whenua e.g. signage, cultural features, events
	People living, working and playing in the Manawatu catchment are aware of the impact they are having on the Estuary	Advocate for water quality and river health improvements via the Manawatū River Leader's Forum

<p><b>Sustainable use and enjoyment of the site increases</b></p>	<p>Education and research use of the site increases Appropriate recreational use of the site increases</p>	<p>The site is actively promoted as a place for meaningful research.</p> <ul style="list-style-type: none"> <li>• Support and encourage recreational activities that are compatible with the values of the site and the management plan</li> <li>• Promote the recreation opportunities available in and around the Estuary</li> <li>• Explore opportunities to improve recreation opportunities e.g. walking paths, bird hides</li> <li>• Educate the public about what is appropriate and inappropriate recreational use of a wetland of international significance</li> <li>• Continue to support the Foxton Beach beach wardens to patrol the area to educate the public about appropriate use and discourage inappropriate use</li> <li>• Maintain liaison with local police regarding appropriate behaviours in support of the beach wardens</li> </ul>
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## 5 THE RAMSAR CONVENTION

In 1976 New Zealand became a contracting party to the International Convention on Wetlands of International Importance (the Ramsar Convention). The Ramsar Convention was initially signed at Ramsar, Iran, on the 2nd of February 1971. The Ramsar Convention has been amended in 1982, 1987 and 1994.

The mission of the Ramsar Convention is

“The conservation and wise use of all wetlands through local, regional and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world” (Ramsar Convention Secretariat, 2004).

On 30 May 2013, 167 Contracting Parties had designated 2123 sites for the List of Wetlands of International Importance, with a total surface area of 205,380,051 hectares.

Article 1 of this Convention defines wetlands as:

“areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.”

The Manawatū Estuary meets this definition of wetland.

Under the Convention, each contracting party (of which New Zealand is one)

“shall designate suitable wetlands within its territory for inclusion in a List of Wetlands of International Importance” (Article 2).

### Criteria for Ramsar Sites

The Convention sets nine criteria which a wetland needs to meet before it can be included as a Ramsar site. The Manawatū Estuary meets criteria 1, 2, 3, 4, 6 and 8 (R.F.B.P.S., 2004) and was established as a Ramsar site in 2005, becoming listed under the Ramsar Convention in 2006. Details of how the Manawatū Estuary met the Ramsar criteria are provided in Table 1.



**Table 1 - Ramsar Criteria met by the Manawatū Estuary (Taken from R.F.B.P.S., 2004)**

Criteria	Assessment of Manawatū Estuary
1. A wetland should be considered internationally important if it contains a representative, rare or unique example of a natural or near-natural wetland type found within the appropriate biogeographical region.	The Manawatū Estuary is a representative example of a natural coastal estuary within the ecological region of Foxton. It is the largest estuary and wading bird feeding grounds in the lower half of the North Island of New Zealand, and retains a high degree of naturalness and biodiversity. It has been recognized by the Department of Conservation as a wetland of national importance, recommended for protection (Ravine, 1992).
2. A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species, or threatened ecological communities.	The ecological communities of the Manawatū Estuary include salt marsh and mudflat feeding grounds for migratory and local water birds and breeding grounds for native fish. There are 13 species of birds, 6 species of fish and 4 species of plants listed in the Threatened Species List, which rely on the Manawatū Estuary ecological area.
3. A wetland should be considered internationally important if it supports populations of plant and/or animal species important for maintaining the biological diversity of this biogeographical region.	<p>The upper reaches of the Manawatū Estuary are comprised of the river channel and large areas of saltmarsh with some open ponds and channels.</p> <p>As access to this area is difficult, it supports a large colony of Fernbird, as well as Royal Spoonbill, Australasian Bittern and Marsh Crake. As the largest saltmarsh in the biogeographical region, these species are important for maintaining the biological plant and animal diversity.</p> <p>Ninety-three bird species have been identified by the Ornithological Society. A current list of bird species is attached as Appendix 2).</p>
4. A wetland should be considered internationally important if it supports plants and/or animals at a critical stage in their life cycles, or provides refuge during adverse conditions.	<p>Flocks of 200-300 New Zealand Shoveller and New Zealand Grey Teal have been seen in the estuary, particularly in the duck-shooting season (May-June).</p> <p>The estuary is also a shelter for wading birds in times of storms when the prevailing westerly winds hammer the coast – on one occasion 800 Wrybill used the Estuary for this purpose (&gt;20% of the world population).</p>
5. A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of a species of water bird.	The Manawatū Estuary regularly supports at least 1% of the world population of Wrybill over the winter months. Reports during the winter of 2006 have stated as many as 70 birds have been seen feeding on the shallows of the estuary, and the total world population is only c.4200.

Criteria	Assessment of Manawatū Estuary
<p>6. A wetland should be considered internationally important if it is an important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend.</p>	<p>The Manawatū River supports a wide range of indigenous fish (Appendix III). The Estuary is both a spawning ground, and a migration path for the native fish in the river.</p> <p>Many species of freshwater fish spend part of their life histories in the sea. There are five different species in the whitebait fishery (inanga, koaro, banded kokopu, giant kokopu and shortjaw kokopu) and all move to and from the sea. No less than 17 endemic species spend a significant part of their life in the sea. They return in spring travelling on the incoming tides to breed in the reeds and marshes of small side streams and the estuary.</p> <p>It is part of New Zealand's cultural heritage for people to go 'whitebaiting' for inanga, and the estuary is popular for this activity. There is a season in the early spring within which whitebaiters are allowed to net for these fish in daylight hours only. Also, local fishermen recall how, in some places in the upper estuary, they have seen the water teeming with thousands of tiny black flounders about 2-3 cm long.</p>

