



# Ohiwa Harbour Marshbird Survey 2020

Bay of Plenty Regional Council  
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Cover photo: "Possible Australasian bittern footprints at Site 25" (photographed by Lisa Bevan)

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# Executive summary

*A survey of marshbird distribution and habitat in Ōhiwa Harbour was conducted during October and November 2020 as part of ecological work involved with the Ōhiwa Harbour Strategy. This work is a re-measure of sites from surveys undertaken in 1990, (Owen, 1994), 2010 (Beattie, 2011) and 2015 (Bevan, 2016). This report compares the results of these surveys as well as the overall health of the harbour estuarine margin habitat to support marshbirds.*

*A total of 44 sites were surveyed for five target marshbirds around the harbour by Bay of Plenty Regional Council staff, Department of Conservation staff and volunteers. Data on bird detections, threats, impacts and habitat quality were collected.*

*It was found that all target marshbird species were detected at a similar number of sites in 2020 compared to 1990, suggesting there hasn't been drastic reduction in the populations of these species over the past 30 years. This is consistent with the fact that 15 sites are now subject to pest animal control (rats and mustelids) and that the number of sites considered to provide high habitat quality has increased. Overall, Ōhiwa Harbour continues to provide important habitat for marshbird species, with strong populations of several different species.*

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# Part 1: Introduction

The Ōhiwa Harbour Strategy (the Strategy) (BOPRC et al., 2014) has been in place since 2007. The Strategy sets a vision for Ōhiwa Harbour (the Harbour) and outlines actions to address key community values and issues. One of these actions is Action 1.8: Monitor and assess the health of Ōhiwa Harbour and its catchment. As a result, a comprehensive monitoring programme has been set up which includes five-yearly monitoring of marshbirds.

The earliest comprehensive survey of marshbirds across the Harbour was undertaken in 1990 (Owen, 1994). This survey follows the same objectives and methodology to enable comparison across the surveys. Since 1990, marshbirds in the Harbour have been surveyed in 2010, 2015 and 2020. Forty four sites were surveyed in 2010, 27 (sites with the highest habitat quality) were surveyed in 2015 and the full 44 sites were surveyed again in 2020. This report outlines the results from the 2020 survey and compares against previous surveys.

## Objectives

The aim of this survey is to compare current marshbird populations and distribution with earlier surveys. Marshbirds are good indicators of estuarine margin habitat condition as they are highly sensitive to modification or loss of this habitat and predation (Froude, 1998), so results from this survey will also add to our understanding of the ecological health of this habitat type in the Harbour and any changes taking place over time.

This survey was undertaken with the following objectives:

- (i) To survey a selection of marshbird habitats identified by Owen (1994) around the Harbour to gain information on the distribution of marshbird species.
- (ii) To gain an indication of population trends by comparing marshbird distributions between surveys.
- (iii) To assess the existing human, animal and natural threats and impacts on marshbird population and their habitats.
- (iv) To recommend management actions necessary to reduce threats and impacts on the long-term ecological welfare of all marshbird populations and habitats.

All birdlife encountered during the survey was recorded, but the work focused on the following five marshbird species identified by Owen (1994):

Table 1 The five target marshbird species surveyed.

Common name	Scientific name	Threat Status ( <i>Robertson et al., 2017</i> )
Australasian bittern (matuku)	<i>Botaurus poiciloptilus</i>	Nationally critical
Banded rail (moho-pererū)	<i>Gallirallus philippensis assimilis</i>	Declining
Spotless crake (pūweto)	<i>Porzana tabuensis tabuensis</i>	Declining
Marsh crake (koitareke)	<i>Porzana pusilla affinis</i>	Declining
North Island fernbird (mātātā)	<i>Bowdleria punctata vealeae</i>	Declining

These species were originally chosen for survey because they are all wetland dwelling birds that rely heavily on marshlands for their habitat (Owen, 1994). This habitat is known to have reduced over time nationally but a number of areas of this habitat remain around the Harbour. They were also surveyed again since 2010 to enable comparison between the surveys, but also because all five are listed as either Threatened or At Risk (Robertson et al., 2017) and therefore targets for protection.



# Part 2: Methodology

This survey follows the same objectives and similar methodology as the previous surveys in 2015 (Bevan, 2016), 2010 (Beattie, 2011) and 1990 (Owen, 1994) to enable comparisons between the surveys.

## Survey coverage

An area of about 380 ha of estuarine and freshwater vegetation in the Harbour has been identified as marshbird habitat (Owen, 1994). This habitat is largely dominated by mixtures of oioi (*Apodasmia similis*), sea rush (*Juncus kraussii* var. *australiensis*), and/or mangroves (*Avicennia marina* subsp. *australasica*) grading into freshwater wetlands and scrub around the margins (Beadel et al., 2013).

Within the 380 ha, 42 sites were surveyed in 1990, 44 sites surveyed in 2010, 27 surveyed in 2015 and 44 surveyed in 2020. As part of the Ōhiwa Harbour Strategy's monitoring programme (Bevan, 2018), all 44 sites are surveyed every 10 years and every 5 years in between a selection of 27 sites with high and outstanding habitat quality are surveyed.



Figure 1 Map of sites surveyed for marshbirds in Ohiwa Harbour.



## Timing of survey

All of the sites were surveyed between 21 October and 25 November 2020, during the target species' breeding season. As with the previous surveys, all sites were visited between the hours of 6:30 am and 10:00 am. Where possible, the time spent at each site was similar to previous duration times from the 2010 or 2015 surveys.

Where possible, surveys were carried out close to low tide, to allow larger parts of the site to be accessed. The number of sites meant it was impossible to visit them all at identical stages of the tidal cycle, which may have influenced the number of birds recorded, particularly banded rail, due to varying times for footprints to accumulate.

## Survey techniques

At each site, a detailed walk-through survey was conducted. This consisted of slowly walking through all or a large part of the area (depending on time and ease of access), playing tape recordings of the target species (using Bluetooth speakers, cell phones and boom boxes) and recording data on the habitat, other bird species and weather conditions. Different areas at each site were targeted for different species, as the target species have been shown to differ significantly in their habitat requirements (Anderson & Ogden, 2003). The tape playback locations in Bevan (2016) were revisited for consistency, however, where there was no tape playback, locations tapes were played about every 200 m and location recorded on aerial photography. At each playback location, sequences of 30 seconds listening and 30 seconds playing tape recordings were repeated with playback of banded rail, spotless crane, marsh crane and fernbird calls.

Data for each site was recorded on the survey sheet shown in Appendix 1. This field sheet is based on field sheets used in previous surveys but has been improved for simplicity. Data recorded includes site details, weather conditions, species record, threats/disturbances, and whether tapes were played. If target species were seen, heard or there was any sign, then this information was also annotated on aerial photography. Route taken through the site was also recorded on aerial photography for some sites. Historical vegetation descriptions from Owen (1994) were updated where appropriate.

## Habitat quality ranking

A habitat quality ranking was assigned to each site based on a range of criteria such as rarity of marshbird species detected, relative number of individuals of a species recorded, size and shape of the wetland, vegetation types and communities within the wetland, habitat diversity, quality of habitat, long-term viability of populations and habitat, representativeness and naturalness of wetland, availability of corridors and buffers to wetland, and level of disturbances. The ranking uses the same three tier system (outstanding, high or moderate) outlined in Owen (1994) to enable comparison between surveys; however, since 2015 a value (low, medium, high or equivalent value) is assigned to each criteria to reduce subjectivity.

# Part 3: Results

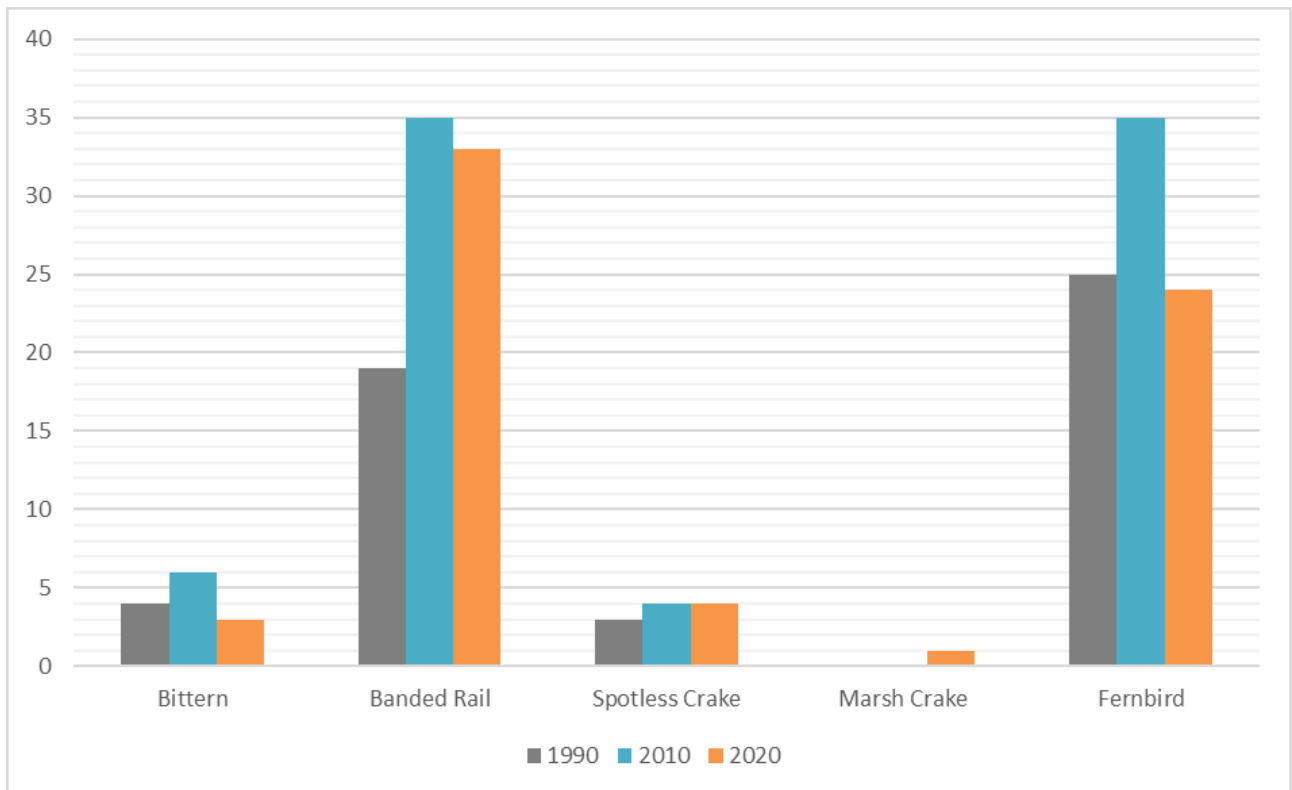
At least one of the target marshbird species was recorded at 35 of 44 sites (80%) in 2020. Only two sites (2 and 44) have never recorded any of the target marshbird species during these surveys.

As shown in Figure 2, the number of sites where banded rail and spotless crane were detected was greater in 2020 compared to the first survey in 1990. However, the number of sites where Australasian bittern and North Island fernbird were detected is slightly less than the first survey in 1990 (a difference of only one site for both species).

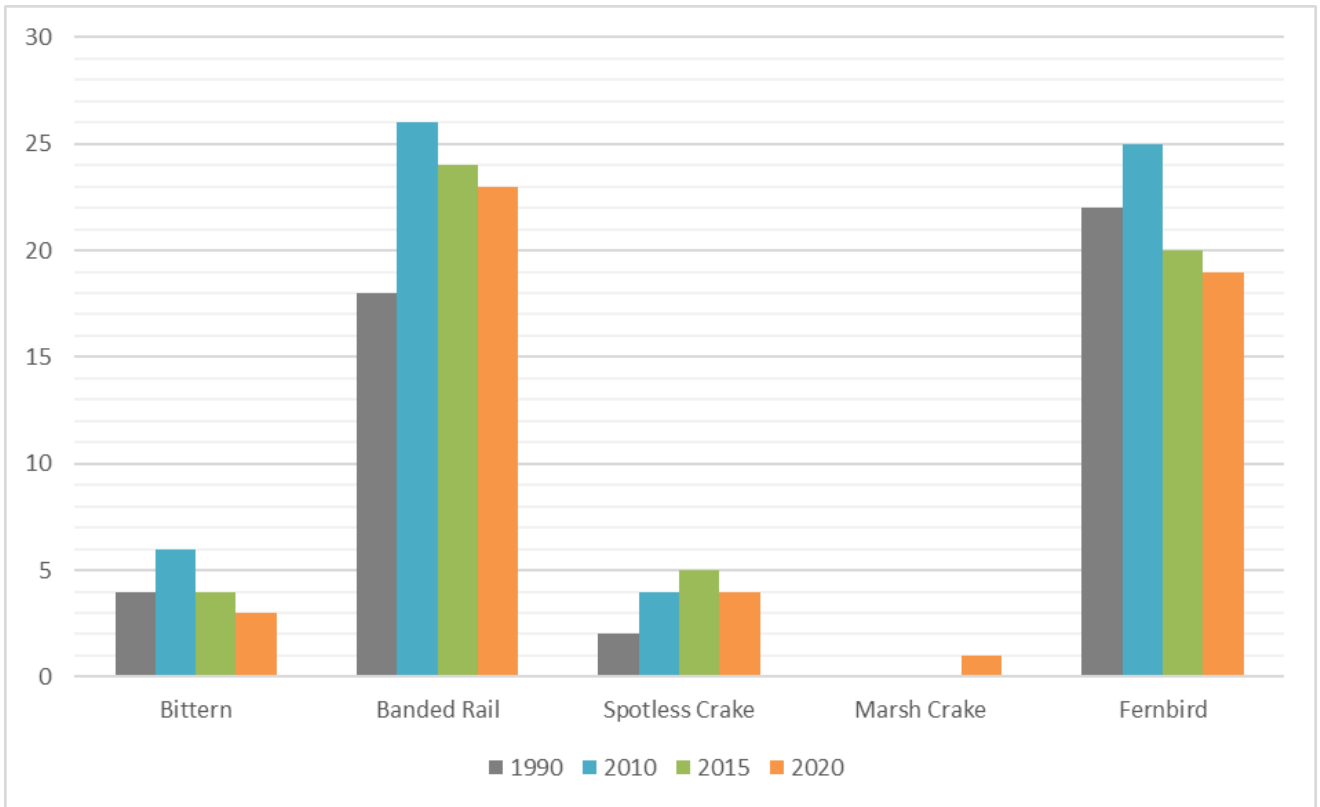
Spotless crane were detected at the same number of sites in 2020 as in 2010; while Australasian bittern, banded rail and fernbird were detected at fewer sites. The differences were small for bittern (three sites) and banded rail (two sites) but quite sizable for North Island fernbird (11 sites). Marsh crane was detected for the first time at one site in 2020.

When the 27 sites surveyed every 5 years are compared, all species were detected at one fewer site in 2020 compared to 2015 (Figure 3).

More detailed information on detections for each species are reported below.



*Figure 2 Total number of sites recording each target marshbird species in years when full survey of all sites was carried out.*



*Figure 3 Total number of sites, of those surveyed every five years, recording each target marshbird species.*

### 3.1 Australasian bittern (matuku)

A map of sites where Australasian bittern were detected during each of the three full surveys is shown in Figures 4 to 6.

Australasian bittern were recorded at three sites in 2020 (sites 15, 21 and 25) (Figure 4) compared to six sites in 2010 and four sites in 1990. Footprints were observed at all three sites but a roost was also observed in addition to footprints at Site 15.

All three of the 2020 sites have previously recorded Australasian bittern. Australasian bittern was previously observed at Site 15 during the 2015 partial survey; at Site 21 in 1990 and Beattie (2011) notes recent local resident reports of Australasian bittern at Site 25. Australasian bittern was not detected at sites 7, 9 and 23, which have had consistent detections in previous surveys. There has also been fewer sightings of Australasian bittern at Site 25 (S.Slade, Nukuhou Saltmarsh Care Group, *pers. comm.*).



Figure 4 Sites with and without Australasian bittern detections during the 2020 survey (three sites with detections).





*Figure 5 Sites with and without detections of Australasian bittern during the 2010 survey (six sites with detections).*



*Figure 6 Sites with and without Australasian bittern detections during the 1990 survey (four sites with detections).*



## 3.2 Banded rail (moho-pererū)

A map of sites where banded rail were detected during each of the three full surveys is shown in Figures 7 to 9.

In the 2020 survey, banded rail were observed at 33 out of 44 sites. Banded rail continues to have the largest number of sites with detections of the target species in the Harbour. The number of sites where banded rail have been detected has decreased slightly (by three sites) since 2010, however, the number remains higher than the number of sites recorded in 1990 (19 sites).

Footprints were the most common form of identifying banded rail presence. These ranged from a single track to multiple tracks, as well as tracks found in different areas indicating the possibility of multiple individuals. Where possible, areas with footprints were noted on aerial maps. At sites 20, 23, 26, 35, 38 and 39, banded rail were heard, and at sites 33 and 36 banded rail was seen.

Out of the 33 sites, 17 have consistently recorded banded rail since 1990. These include sites 9, 10, 12, 14, 15, 20, 21, 23, 26, 30, 32, 33, 36, 37, 38, 39 and 40.



*Figure 7 Sites with and without banded rail detections during the 2020 survey (33 sites with detections).*





**Figure 8** Sites with and without banded rail detections during the 2010 survey (35 sites with detections)



**Figure 9** Sites with and without banded rail detections during the 1990 survey (19 sites with detections).



### 3.3 Spotless crane (pūweto)

A map of sites where spotless crane were detected during each of the three full surveys is shown in Figures 10 to 12. Reports from a local care group in 2010 have been included in Figure 11 and although spotless crane were not detected during the survey in 2010, it is likely spotless crane were present at sites 23 and 39 in 2010 (Beattie, 2011).

In 2020, spotless crane were recorded at four sites (site 14, 15, 20 and 30). Footprints were observed at sites 14, 15 and 30, whereas one spotless crane was heard at Site 20. Spotless crane have consistently been recorded at Site 20 since surveying began in 1990.

Previous surveys, when including local reports, had seen an increase in sites with spotless crane detections, however, the number of sites recorded in 2020 has returned to the same number as was recorded in 2010.



*Figure 10 Sites with and without spotless crane detections during the 2020 survey (four sites with detections).*





*Figure 11 Sites with and without spotless crane detections during the 2010 survey (two sites with detections). Local care group reports in red.*



*Figure 12 Sites with and without spotless crane detections during the 1990 survey (three sites with detections).*



### 3.4 Marsh crake (koitareke)

A map of sites where marsh crake were detected during the survey is shown in Figure 13.

Marsh crake have been recorded for the first time during the 2020 survey when one individual was heard at Site 33. It is possible there are more marsh crake in Ōhiwa Harbour but are under detected due to the cryptic nature and averseness to being vocal during the morning (Bevan, 2016). A local resident has since heard a marsh crake calling near Site 35 (T. Senior, BOPRC, pers. comm.).



Figure 13 Sites with and without marsh crake detections during the 2020 survey (one site with detections).





### 3.5 North Island fernbird (mātātā)

A map of sites where North Island fernbird were detected during each of the three full surveys is shown in Figures 14 to 16.

North Island fernbird were the most frequently seen and heard of the target species in Ōhiwa Harbour. Recorded at 24 sites, the number of sites with North Island fernbird detections have decreased very slightly from the 25 sites recorded in 1990 (Figure 2). Of the 25 sites, 17 have consistently recorded fernbird since 1990. North Island fernbird have also been sighted in other non-marsh scrubby habitats that were not part of this survey (T. Senior, BOPRC, *pers. comm.*).



Figure 14 Sites with and without North Island fernbird detections during the 2020 survey (24 sites with detections).





*Figure 15 Sites with and without North Island fernbird detections during the 2010 survey (35 sites with detections).*



*Figure 16 Sites with and without North Island fernbird detections during the 1990 survey (25 sites with detections).*

# Part 4: Habitat rankings and threats

## 4.1 Habitat rankings

In 1990, one site was classified as outstanding habitat quality and eight as high habitat quality. The one site classed as outstanding habitat quality has remained as outstanding and the total number of high quality sites has increased to 12 in 2020 (Figure 17).

Of the eight sites originally classified as having high quality habitat, four have since degraded to a moderate condition. These are sites 7,9,12 and 25 and have degraded for a range of reasons including sedimentation, drying out, fewer individual birds recorded, and stock having access to wetland. However, a further eight sites have improved to be classified as having high habitat quality. These are sites 5, 10, 14, 30, 32, 35, 36 and 40 and have improved due to the expansion of mangroves creating additional habitat, greater number of individuals recorded and greater diversity.

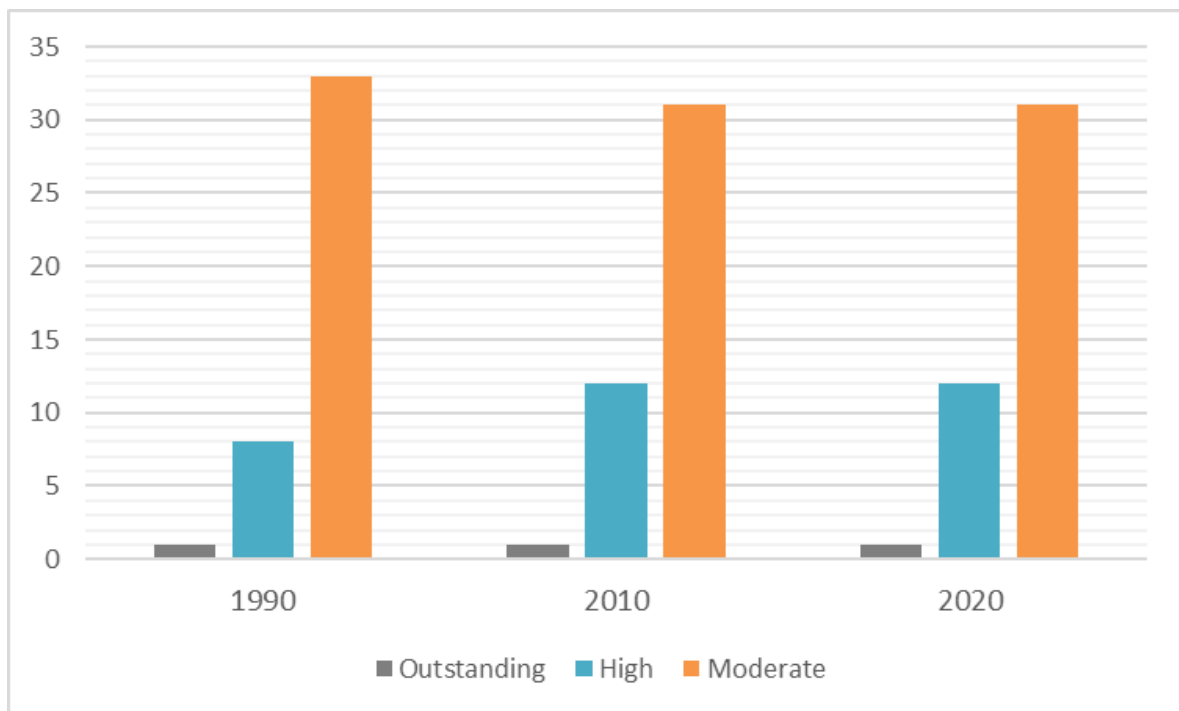


Figure 17 Habitat rankings of sites for each survey.

## 4.2 Threats

Threats to the survival or suitability of habitat for the target marshbirds were recorded for each site where possible and used to form appropriate management actions in Part 6. The themes of threats recorded have been graphed in Figure 18. Most sites were affected by adventive plants followed by human disturbance then introduced mammals.



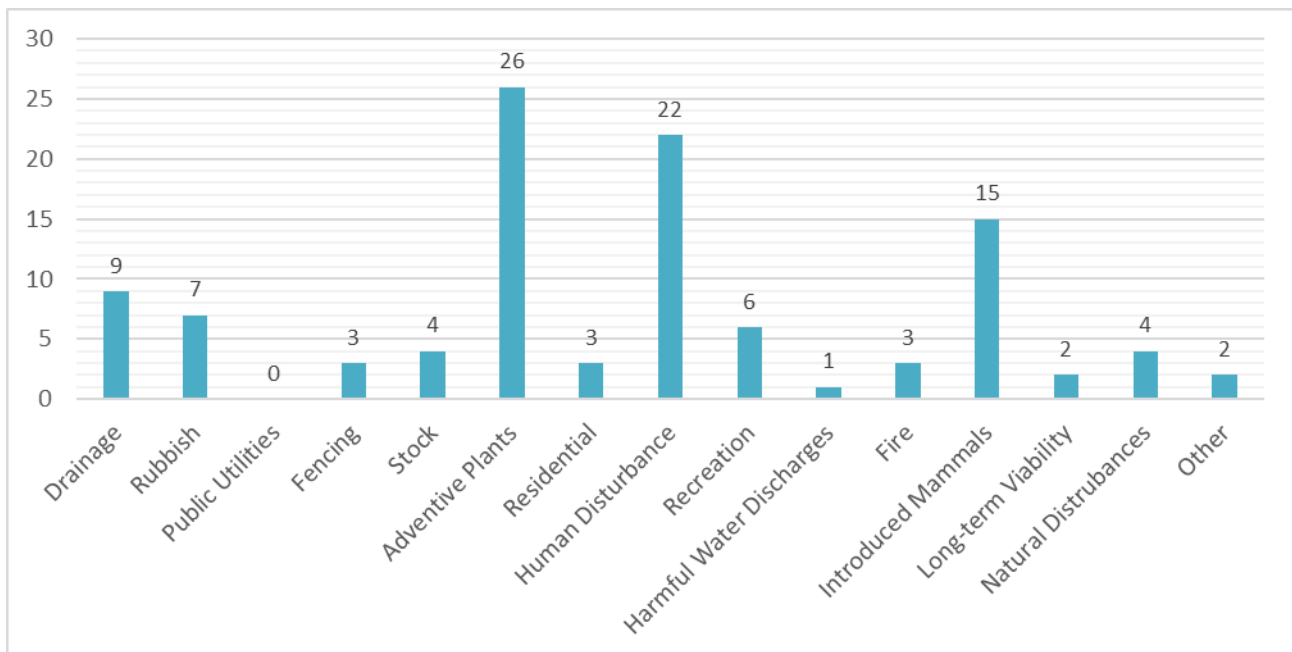


Figure 18 Threats to the survival or suitability of habitat for sites surveyed.

Across the literature (O'Donnell & Robertson, 2016; Parker & Brunton, 2004; O'Donnell et al., 2015), the biggest modern threats to the target marshbirds species include: habitat loss, habitat degradation, grazing, predation and accidental deaths (particularly for Australasian bittern). Comments on these major threats are discussed below.

#### 4.2.1 Habitat extent

Although habitat extent was not included as part of this survey, there were observations of habitat loss in the form of human tracks and minor mangrove removal. Some sites had many human tracks through the marshbird habitat and at two sites, (sites 8 and 35) banded rail detections were notably absent from the areas with extensive tracks and present in the less disturbed areas. This human disturbance appears to be reducing the amount of usable habitat for the marshbirds. A track cut through raupo at Site 34 has destroyed vital habitat.

There were also sites where the expansion of mangroves and mangroves previously killed by a historic hail storm (Beattie, 2011) was notable (sites 8, 10, 30, 32, 36, 40) and may increase the habitat available to banded rail in particular.

#### 4.2.2 Habitat degradation

For habitat degradation, refer to section 4.6 (Habitat rankings).

#### 4.2.3 Grazing

Of the 44 sites, four were threatened by grazing and trampling from stock. These include sites 14, 25, 29 and 30.

#### 4.2.4 Introduced mammals

Introduced mammals were recorded as a threat at 15 sites. These sites are where introduced mammal presence, usually footprints, were identified at the site and include rats (prints at sites 2, 12, 13, 18, 20, 25, 28, 34 and 40), cats (prints at site 18), rabbits (faeces at site 1), pig (wallows at Site 8 and seen at Site 21), deer (seen by local resident at Site 19) and domestic dogs (at sites 1 and 3). As some form of pest control is only undertaken at 15 sites (sites 1, 2, 3, 23, 24, 27, 28, 33, 34, 35, 36, 38, 39, 41 and 44) (Figure 19), it is highly likely introduced mammals are a major threat to all sites without pest control.



Figure 19 Sites with and without some form of pest control.

#### 4.2.5 Accidental deaths

No bird deaths were observed during the survey.



## Part 5: Limitations of survey

Interpretations of the results are limited by the snapshot nature of this survey, and the cryptic behaviour of the marsh birds surveyed. Different detection rates/probabilities may have resulted from inconsistencies in methodology (i.e. amount of time spent at each site, tidal differences, differences in survey routes), differences in observational skills, or a number of environmental conditions. A lack of detections at a site on a single visit doesn't necessarily mean that a species is absent from that site – as further visits may have resulted in detections. At least two or three visits are probably required to infer absence of marshbird species with reasonable confidence (O'Donnell & Williams, 2015).

# Part 6: Conclusions and Recommendations

All target marshbird species were detected at a similar number of sites in 2020 compared to 1990, suggesting there hasn't been drastic reduction in the populations of these species over the past 30 years. This is consistent with the fact that 15 sites are now subject to pest animal control (rats and mustelids) and that the number of sites considered to provide high habitat quality has increased. Overall Ōhiwa Harbour continues to provide important habitat for marshbird species, with strong populations of several different species.

Nevertheless, human tracking, grazing and introduced mammals pose a threat to marshbirds at a number of sites. It is thus recommended that:

- Those who frequently access the mangrove wetlands are educated about the threatened marshbird species present and ways to reduce their impact.
- Stock exclusion is ensured at those wetlands where stock has been observed to be an issue.
- Support for care group activities is continued, particularly predator control and habitat enhancement, as this is considered to be a large factor in the abundance and distribution of several species.
- Pest control is extended to Site 20 in particular, as it consistently supports several threatened marshbird species.
- The human impacts noted in 4.7 should be followed up to see if such impacts in these areas can be avoided in the future.
- Given the first record of marsh crake, further monitoring should be undertaken to see if there is more than one bird present, and therefore potentially a breeding population. Enhanced pest control in this area is also recommended.

It is also recommended that more robust/frequent monitoring of selected marshbird species around Ōhiwa Harbour is considered:

- Annual monitoring of Australasian bittern using acoustic recording devices has been occurring at five sites since 2020 and this should continue<sup>1</sup>
- Monitoring of relative abundance of spotless crake and fernbird could be undertaken at selected sites using DOC monitoring protocols (in preparation).
- A one-off dusk survey for marsh crake at a selection of sites around the Harbour should be undertaken to provide more information on this species.

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<sup>1</sup> It is noted that DOC and BOPRC have recently embarked on a collaborative project to monitor Australasian bittern at mainly coastal sites from Tauranga Harbour to Opotiki (including five sites in Ōhiwa Harbour). This monitoring utilises acoustic recording devices and is intended to be undertaken annually (Caley, 2021).

Bay of Plenty Regional Council has recently initiated a monitoring programme aiming to assess trends in the condition of estuarine wetlands across the region. This programme aims to include at least 31 vegetation plots within Ōhiwa Harbour, which will be measured in April/May at five yearly intervals. As part of this monitoring, a five minute bird count is undertaken at each plot, and field staff also record any birds seen or heard during the course of monitoring (including on their way to and from plots). This work may mean that a partial five yearly repeat of this survey is no longer required, this should be considered closer to the time of the next five year survey.

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# Appendices

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# Appendix 1: Field Sheet

## OHIWA HARBOUR 2015 MARSHBIRD SURVEY SHEET

Site Name: \_\_\_\_\_  
 Site No: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Time Spent in Area: \_\_\_\_\_  
 Habitat Quality: Outstanding/ High/ Moderate  
 Observers: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Weather (circle the option that's most appropriate)			
Temperature	Wind	Other Noise	Rainfall
1 Freezing <0 °C	0 Leaves still	0 Not important	0 None
2 Cold 0-5°C	1 Leaves rustling	1 Moderate	1 Dripping foliage
3 Cool 5-10°C	2 Leaves and branches in constant motion	2 Loud	2 Drizzle
4 Mild 10-15°C	3 Branches or trees swaying		3 Light
5 Warm 15-20°C			4 Moderate
6 Hot 20-25°C			5 Heavy

Species	Number of birds seen	Number of birds heard	Bird sign observed	Recordings played?	Recording sequence
Australasian bittern					
Banded rail					
Spotless crake					
Marsh crake					
North Island fernbird					

### Threats/Disturbances

- |  |       |   |       |
|--|-------|---|-------|
| <input type="checkbox"/> Reclamation       | _____ | <input type="checkbox"/> Harmful water discharges       | _____ |
| <input type="checkbox"/> Drainage          | _____ | <input type="checkbox"/> Fire                           | _____ |
| <input type="checkbox"/> Rubbish           | _____ | <input type="checkbox"/> Introduced mammals             | _____ |
| <input type="checkbox"/> Public utilities  | _____ | <input type="checkbox"/> Quality of habitat             | _____ |
| <input type="checkbox"/> Fencing           | _____ | <input type="checkbox"/> Long-term viability            | _____ |
| <input type="checkbox"/> Stock             | _____ | <input type="checkbox"/> Recommended management actions | _____ |
| <input type="checkbox"/> Adventive plants  | _____ | <input type="checkbox"/> Natural disturbances           | _____ |
| <input type="checkbox"/> Residential       | _____ | <input type="checkbox"/> Other                          | _____ |
| <input type="checkbox"/> Human disturbance | _____ |   |       |
| <input type="checkbox"/> Recreation        | _____ |   |       |

Additional comments:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Other bird species:

\_\_\_\_\_  
 \_\_\_\_\_

# Appendix 2:

## Site Sheets

**Site name:** Port Hope  
**Site number:** 1  
**Survey date:** 20/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
North Island Fernbird	1	1		
Other observed bird species				
Tui, pūkeko, starling, blackbird, dove, house sparrow, common pheasant, chaffinch.				
Existing threats and impacts				
Adventive plants	Wattle, gorse, blackberry, sea couch.			
Human Disturbance	Freedom camping at eastern end			
Recreation	Fishing, walking and tracks			
Introduced mammals	Dogs, rabbits			

**Habitat quality:** Moderate

**Site name:** Munro Subdivision  
**Site number:** 2  
**Survey date:** 20/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Other observed bird species				
House sparrow, skylark, tui, weka, yellow hammer, heron, blackbird, song thrush.				
Existing threats and impacts				
Adventive plants				
Recreation	Walking/biking track through site			
Introduced mammals	Rats			

**Habitat quality:** Moderate

**Site name:** Harbour Road

**Site number:** 3

**Survey date:** 19/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
Other observed bird species				
Blackbird, bar-tailed godwit, variable oystercatcher, weka.				
Existing threats and impacts				
Drainage	Drains in raupō reedland on western side are recently maintained/cleared			
Human disturbance	Tracks cut through saltmarsh to estuary. Minor mangrove removal			
Recreation	Jetties, walkway through site, dog prints through site			
Recommended management actions	Encourage dogs on lead, discourage track cutting			
Natural disturbances	Minor erosion			

**Habitat quality:** Moderate

**Site name:** Ohakana

**Site number:** 4

**Survey date:** 19/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	Banded rail prints seen along intertidal "drain" on western side.
Other observed bird species				
Weka, duck (prints).				
Existing threats and impacts				
Residential	Mowed right up to saltmarsh			
Human disturbance	Adjacent to residential houses			

**Habitat quality:** Moderate



**Site name:** Harbour Reach

**Site number:** 5

**Survey date:** 19/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	Lots of banded rail prints especially further away from houses/closer to harbour.
Fernbird		1		
Other observed bird species				
Welcome swallow.				
Existing threats and impacts				
Adventive plants	Wattle			
Human disturbance	Small human track (doesn't look like it gets used often probably only the once). Minimal impact from residential housing			

**Habitat quality:** High

**Site name:** Wainui Road Inlet

**Site number:** 6

**Survey date:** 19/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	Lots of banded rail prints on western side.
Other observed bird species				
Pūkeko, weka, tui.				
Existing threats and impacts				
Drainage	Stormwater drains run off road to site			
Human disturbance	Mangrove removal			

**Habitat quality:** Moderate

**Site name:** Awarapatuna Stream

**Site number:** 7

**Survey date:** 06/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
Fernbird	2	5		
Other observed bird species				
Eastern rosella, welcome swallow, kereru, mallard, shining cuckoo, sacred kingfisher, weka, Australasian harrier, pūkeko.				
Existing threats and impacts				
Human disturbance	Adjacent forestry along southern edge has recently been felled and logs and other by products have fallen into the wetland			

**Habitat quality:** Moderate

**Site name:** Harbour Quarry Shoreline

**Site number:** 8

**Survey date:** 06/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	No banded rail prints where mangrove removal has happened.
Other observed bird species				
Tui, house sparrow, white-fronted tern, variable oystercatcher, royal spoonbill.				
Existing threats and impacts				
Rubbish	Tyres, rubbish over road bank			
Human disturbance	Boat ramp, lots of tracks through mangroves and marshlands, mangrove removal			
Introduced mammals	Pigs wallowing and damaged saltmarsh			

**Habitat quality:** Moderate

**Site name:** Tunanui Stream Inlet

**Site number:** 9

**Survey date:** 23/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
Fernbird	3	8		
Other observed bird species				
Paradise duck, pūkeko.				
Existing threats and impacts				
Adventive plants	Pampas, sea couch, willow, saltwater paspalum			
Drainage	Ringed by drains. Tunanui Stream has been channelised and possibly causing the wetland to dry out			

**Habitat quality:** Moderate

**Site name:** Burma Road

**Site number:** 10

**Survey date:** 23/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
Fernbird	2			
Other observed bird species				
Existing threats and impacts				
Residential	Single house in close proximity			
Human disturbance	Mangrove removal and track to mangrove removal site			

**Habitat quality:** High

**Site name:** Pukehoko  
**Site number:** 11  
**Survey date:** 23/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Other observed bird species				
Weka (lots of prints).				
Existing threats and impacts				
Human disturbance	Human tracks and mangrove removal			

**Habitat quality:** Moderate

**Site name:** Waitane Stream  
**Site number:** 12  
**Survey date:** 23/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
Fernbird		4		
Other observed bird species				
Sacred Kingfisher, common pheasant, pūkeko.				
Existing threats and impacts				
Rubbish	Dumped house hold rubbish in southern corner by road			
Human disturbance	Historical drains, tracks through saltmarsh			
Introduced mammals	Rats (prints seen on eastern side and along north west drain)			

**Habitat quality:** Moderate

**Site name:** Te Kooti Inlet  
**Site number:** 13  
**Survey date:** 22/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
Fernbird		5		
Other observed bird species				
Paradise shelduck, pūkeko, weka, blackbird, welcome swallow, shining cuckoo, California quail, stilt, common pheasant, Australian magpie.				
Existing threats and impacts				
Rubbish	Debris from road verge clearance put over bank into saltmarsh			
Fencing	Abandoned line			
Adventive plants	Pampas on margins			
Introduced mammals	Rat (prints)			
Other	Roadside noise (lots of traffic)			

**Habitat quality:** Moderate



**Site name:** Wainui Stream

**Site number:** 14

**Survey date:** 22/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	Banded rail prints visible in most of site
Spotless crane			Prints	Spotless crane prints visible in most of site
Fernbird		7		
Other observed bird species				
Black-backed gull, paradis shelduck, welcome swallow, spur-winged plover, weka, pūkeko, silvereye, fantail, shinning cuckoo, tui, blackbird, grey warbler, eastern rosella, sacred kingfisher.				
Existing threats and impacts				
Adventive plants	Willow, blackberry, pampas, thistles, gorse and exotic grasses			
Human disturbance	Some tracks, whitebaiting			
Stock	Stock in places			
Recommended management actions	Manage willows on margins and other weeds. Remove stock access			

**Habitat quality:** High

**Site name:** Paparoa Road

**Site number:** 15

**Survey date:** 22/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Australasian bittern			Prints and roost	
Banded rail			Prints	
Spotless crane			Prints	
Other observed bird species				
Grey warbler, white-faced heron, pukeko, weka.				
Existing threats and impacts				
Adventive plants	Sea couch encroaching			
Human disturbance	Small jetty cut into rushes. Likely for access for fishing or hunting etc			
Recommended management actions	Manage pest plants and animals. Educate residents about the threatened species present			

**Habitat quality:** High

**Site name:** McCoy Stream

**Site number:** 16

**Survey date:** 23/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	Found on southern side of site
Other observed bird species				
Yellow hammer, weka, Eastern rosella, grey warbler, tui, sacred kingfisher.				
Existing threats and impacts				
Adventive plants	Rose, convolvulus, willow			

**Habitat quality:** Moderate

**Site name:** Whitiwhiti Point

**Site number:** 17

**Survey date:** 23/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Other observed bird species				
Pūkeko, shinning cuckoo, Californian quail, sacred kingfisher				
Existing threats and impacts				
Adventive plants	Pampas, gorse, blackberry, willow, wattles			

**Habitat quality:** Moderate

**Site name:** Paparoa Point Inlet

**Site number:** 18

**Survey date:** 23/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
Fernbird	1	1		
Other observed bird species				
Heron (prints), welcome swallow, common pheasant, paradise shelduck, weka.				
Existing threats and impacts				
Adventive plants	Pampas, gorse			
Introduced mammals	Cats (prints seen on western end), rats (prints)			

**Habitat quality:** Moderate

**Site name:** Paparoa Road Peninsula Inlet

**Site number:** 19

**Survey date:** 23/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
<b>Other observed bird species</b>				
Existing threats and impacts				
Adventive plants	Exotic grasses			
Drainage	Relatively poor			
Human disturbance	Mangrove removal			
Introduced mammals	Deer seen by residents			

**Habitat quality:** Moderate

**Site name:** Wainui Wetland

**Site number:** 20

**Survey date:** 22/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail		3	Prints	Prints at 5 or more distinct locations
Spotless crane		1		
Fernbird	2	10		
<b>Other observed bird species</b>				
Pūkeko, Australasian harrier, paradise shelduck, white-faced heron, weka, eastern rosella, sacred kingfisher, pied stilts.				
Existing threats and impacts				
Adventive plants	Gorse			
Human disturbance	Possible track to Harbour on western arm which may impact site			
Introduced mammals	One set of rat prints seen			
Natural disturbances	Small amounts of erosion decreasing saltmarsh habitat			

**Habitat quality:** High



**Site name:** Ouaki Creek  
**Site number:** 21  
**Survey date:** 23/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Australasian bittern			Prints	
Banded rail			Prints	
North Island fernbird	1	4		
Other observed bird species				
Common pheasant, paradise shelduck, pukeko, mallard, weka, goldfinch.				
Existing threats and impacts				
Drainage	Poor in upper section			
Introduced mammals	Possibly a pig seen which crossed the estuary from east to west			
Reclamation	Stopbank			

**Habitat quality:** Moderate

**Site name:** Toritori Point  
**Site number:** 22  
**Survey date:** 10/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Other observed bird species				
Sacred kingfisher, common pheasant, tui, welcome swallow, white-faced heron, finches, grey warbler, Indian myna, silvereye, pūkeko (prints).				
Existing threats and impacts				
Habitat quality	Poor. Patch of dead mangroves amongst smelly mud			

**Habitat quality:** Moderate

**Site name:** Nukuhou River Marshes

**Site number:** 23

**Survey date:** 08/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail		3	Prints	One set of prints found
Fernbird	82	13		
Other observed bird species				
Blackbird, song thrush, chaffinch, pūkeko, sacred kingfisher, goldfinch, North Island fantail, grey warbler, weka, Australasian harrier, shining cuckoo, tui, silvereye, common pheasant, welcome swallow, black shag, skylark, white-faced heron, caspian tern, paradise shelduck, Californian quail.				
Existing threats and impacts				
Adventive plants	Pampas, crack willow and gorse			
Fire	Severed vegetation and buildings by fire close to site on the eastern side of the Nukuhou saltmarsh			
Recreation	Whitebaiting river stands			
Introduced mammals	Local care group continues pest control			
Recommended management actions	Continue pest plant and animal control			

**Habitat quality:** High

**Site name:** Nukuhou River Riparian Margins

**Site number:** 24

**Survey date:** 05/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Fernbird		11		
Other observed bird species				
Existing threats and impacts				
Recreation	Human and vehicle tracks			
Human disturbance	Revegetation with natives			

**Habitat quality:** Moderate

**Site name:** Hiwarau Wetlands

**Site number:** 25

**Survey date:** 24/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	Prints found throughout mangroves
Other observed bird species				
Existing threats and impacts				
Fencing	Old barbed wire partially submerged in harbour			
Adventive plants	Saltwater paspalum			
Stock	Stock were found grazing within site			
Recommended management actions	Remove stock access to site. Remove old barbed wire fence Control adventives			

**Habitat quality:** Moderate

**Site name:** Te Awawairoa Stream

**Site number:** 26

**Survey date:** 09/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail		2		Was raining at the time of survey and possibly why no fernbird were heard at site. Banded rail prints were notably absent around the northern harbour side where there was human disturbance (tracks).
Other observed bird species				
Existing threats and impacts				
Adventive plants	Pampas, gorse, saltwater paspalum			
Human disturbance	Mangrove removal and human tracks. Wide track cut through mangrove/saltmarsh on northern harbour side			
Drainage	Historical drains and stopbank have altered drainage of upper wetland			
Rubbish	Rubbish scattered throughout northern harbour side of site. Possibly related to harvesting			

**Habitat quality:** Moderate



**Site name:** Kutarere Wharf Road Shoreline

**Site number:** 27

**Survey date:** 09/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	Sighted on eastern side of site
Fernbird		1		Heard on eastern side of site
Other observed bird species				
North Island fantail				
Existing threats and impacts				
Human disturbance	Lots of human tracks throughout site. Kayak washed up in mangroves. Mangrove removal			
Drainage	Historical stopbank lines the inland border of site			

**Habitat quality:** Moderate

**Site name:** 28

**Site number:** Kutarere Stream Mouth

**Survey date:** 25/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
Other observed bird species				
Weka (Lots of prints observed on streambanks)				
Existing threats and impacts				
Adventive plants	Pampas			
Introduced mammals	Rats (prints observed along streambanks)			
Drainage	Historical stopbank lines the boundary of site either side of stream			

**Habitat quality:** Moderate

**Site name:** Papanui Road

**Site number:** 29

**Survey date:** 11/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
<b>Other observed bird species</b>				
Existing threats and impacts				
Adventive plants	Rushland on northern side invaded by exotic grasses			
Drainage	Southern part is modified by drains which has been cleared and dug with spoil dumped on side			
Human disturbance	Mangroves very modified with little marsh habitat. Drain clearing and spoil dumping on side			
Stock	Cattle have access to northern side resulting in tramping etc			

**Habitat quality:** Moderate

**Site name:** State Highway 2 (Overflow Bridge)

**Site number:** 30

**Survey date:** 11/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	Relatively little sign in and around adjacent mangroves, although tide did not favour us as was just reaching low ebb.
Spotless crane			Prints	
North Island fernbird		1		
<b>Other observed bird species</b>				
Caspian tern, white-faced heron, mallard, pūkeko, sacred kingfisher, welcome swallow, Australasian harrier.				
Existing threats and impacts				
Stock	Stock have access to some rushland			

**Habitat quality:** High

**Site name:** Ruatuna Road Embayment

**Site number:** 31

**Survey date:** 20/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
<b>Other observed bird species</b>				
Existing threats and impacts				
Drainage	Extremely muddy by culvert. Ringed by drains			

**Habitat quality:** Moderate

**Site name:** Pataua Island Scientific Reserve

**Site number:** 32

**Survey date:** 24/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
<b>Other observed bird species</b>				
Sacred kingfisher, Australian magpie, grey warbler, song thrush, tui, white-faced heron.				
Existing threats and impacts				
Rubbish	Rubbish on eastern side of island			
Human disturbance	Track throughout, lots of human footprints			
Other	Lots of new young shoots where there were previous dead mangroves			

**Habitat quality:** High



**Site name:** Ruatuna Road

**Site number:** 33

**Survey date:** 21/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail	1		Prints	Prints throughout mangroves
Marsh crake		1		
Fernbird		1		
Other observed bird species				
House sparrow, sacred kingfisher, silvewye, North Island fantail, tui, welcome swallow, weka.				
Existing threats and impacts				
Adventive plants	Saltwater paspalum			
Recreation	Kayaks in saltmarsh			
Fire	Fire went through saltmarsh on eastern side 3 years ago (according to local resident) and has since been succeeded with sea couch			
Residential	Houses in close proximity with access to harbour			

**Habitat quality:** Moderate

**Site name:** Ruatuna Road Inlet

**Site number:** 34

**Survey date:** 21/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
Other observed bird species				
Weka, sacred kingfisher, bar-tailed godwit, pukeko (prints).				
Existing threats and impacts				
Rubbish				
Adventive plants	Pampas and wattle. Raupo on eastern side is being overtaken by weeds (Japanese honeysuckle, grape vine, ladder fern vine)			
Human disturbance	Track cleared through raupo from dwelling to harbour. Mangrove removal and dead material left in harbour			
Natural disturbance	Erosion of spit (western side is narrower)			
Introduced mammals	Rats (prints)			
Recommended management actions	Discourage raupo reedland clearance			

**Habitat quality:** Moderate

**Site name:** Pukeruru Point Inlet

**Site number:** 35

**Survey date:** 21/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail		2	Prints	
Fernbird	13	4		
Other observed bird species				
Mallard, Paradise shelduck, sacred kingfisher, weka.				
Existing threats and impacts				
Adventive plants	Wattle, pine, willow and pampas			
Recommended management actions	Continue pest control and weed control needed			

**Habitat quality:** High

**Site name:** Ohiwa Scenic Reserve Inlet

**Site number:** 36

**Survey date:** 21/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail	1		Prints	
Fernbird		2		
Other observed bird species				
Existing threats and impacts				
Drainage	Poor flushing and threatens long term viability			
Rubbish	Minor rubbish			
Adventive plants	Minor			
Human disturbance	Minor			
Recommended management actions	Consider drainage improvements			

**Habitat quality:** High

**Site name:** Ohiwa Loop Road Spit

**Site number:** 37

**Survey date:** 21/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	Prints observed throughout site
Other observed bird species				
Heron, sacred kingfisher, spur-winged plover, house sparrow, pūkeko, tui, variable oystercatcher, shining cuckoo, black-backed gull, weka, North Island fantail.				
Existing threats and impacts				
Rubbish	Barbed wire roll (pile) and old barbeque			
Human disturbance	Mangrove removal. Cut mangroves left in harbour in small spot by houses			
Harmful water discharges	Minor oil patches on water surface by houses			

**Habitat quality:** Moderate

**Site name:** Reeves Road Inlet

**Site number:** 38

**Survey date:** 21/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail	1		Prints	
Fernbird	1	1		
Other observed bird species				
Pūkeko, paradise shelduck, sacred kingfisher, weka, kereru, shag, variable oystercatcher, mallard.				
Existing threats and impacts				
Adventive plants	Pampas, gorse and convolvulus			
Other	Care group plantings and weed control have improved habitat on margins			

**Habitat quality:** Moderate



**Site name:** Uretara Island Scenic Reserve

**Site number:** 39

**Survey date:** 16-18/11/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail		1	Prints	Likely at least 2 birds. Prints observed on south-west end of Island. Banded rail heard in north-west inlet.
Fernbird	22	66		
Other observed bird species				
Oyster catcher, sacred kingfisher, chaffinch, silvereye, grey warbler, blackbird, Eastern rosella, song thrush, pūkeko, North Island fantail, goldfinch, weka (prints), white-faced heron, yellow hammer, tui, Australasian harrier, caspian terns, black swans, common pheasant, mallard, shining cuckoo, welcome swallow, black-backed gull.				
Existing threats and impacts				
Fire	Part of area burnt in 2018			
Recommended management actions	Remove weeds			

**Habitat quality:** High

**Site name:** Motuotu Island Nature Reserve

**Site number:** 40

**Survey date:** 27/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
Fernbird	4	7		
Other observed bird species				
Black swans, weka (lots of prints), shining cuckoo, green finch, heron, welcome swallow.				
Existing threats and impacts				
Adventive plants	Wattle			
Introduced mammals	Lots of rat prints especially on northern side			
Other	Foam/mooring and drum have washed up on island			

**Habitat quality:** High

**Site name:** Whangakopikopiko Wildlife Refuge Reserve

**Site number:** 41

**Survey date:** 23/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
Fernbird	9	22		
Other observed bird species				
New Zealand dotterel, Australasian harrier, Variable oystercatcher, red-billed gull, black-backed gull (large numbers), pūkeko (prints), weka (prints).				
Existing threats and impacts				
Adventive plants	Some blackberry, gorse and lupin but largely under control			
Natural disturbances	Erosion/tidal inundation			
Recommended management actions	Continue predation and weed control			

**Habitat quality:** High

**Site name:** Ohiwa Loop Road Unnamed Island

**Site number:** 42

**Survey date:** 23/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Banded rail			Prints	
Other observed bird species				
Existing threats and impacts				
Adventive plants	Gorse, pampas (possibly sprayed or died off)			
Recommended management actions	Possibly set up 1-2 traps as there are fernbird habitat but no fernbird seen maybe due to transient pests			

**Habitat quality:** Moderate

**Site name:** Stuart's Bittern Spot

**Site number:** 43

**Survey date:** 22/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
Fernbird		1		
Other observed bird species				
Pūkeko, paradise shelduck, sacred kingfisher, grey warbler.				
Existing threats and impacts				
Adventive plants	Willow, blackberry, pampas			
Fencing	Disused			
Rubbish	Litter and dumped rubbish			

**Habitat quality:** Moderate

**Site name:** Ohiwa Domain

**Site number:** 44

**Survey date:** 21/10/2020

Surveyed birds				
Species	Seen	Heard	Sign	Notes/comments
<b>Other observed bird species</b>				
Tui, sacred kingfisher, shining cuckoo, grey warbler.				
Existing threats and impacts				
Adventive plants	Blackberry, bindweed, privet			
Long-term viability	Unsure about viability of site for marshbirds			

**Habitat quality:** Moderate



## Appendix 3:

# Bird species recorded during 2020 survey

Common name	Māori name	Scientific name	Threat status (Roberston et al., 2017)
Australasian bittern	Matuku	<i>Botaurus poiciloptilus</i>	Nationally Critical
Australasian harrier	Kāhu	<i>Circus approximans</i>	Not threatened
Australian magpie		<i>Gymnorhina tibicen</i>	Introduced and naturalised
Banded rail	Moho-pererū	<i>Gallirallus philippensis assimilis</i>	Declining
Bar-tailed godwit	Kuaka	<i>Limosa lapponica baueri</i>	Declining
Black shag	Kawau	<i>Phalacrocorax carbo novaehollandiae</i>	Naturally uncommon
Black swan	Kakīānau	<i>Cygnus atratus</i>	Not threatened
Black-backed gull	Karoro	<i>Larus dominicanus dominicanus</i>	Not threatened
Black-billed gull	Tarāpuka	<i>Larus bulleri</i>	Nationally Critical
Blackbird		<i>Turdus merula</i>	Introduced and naturalised
California quail		<i>Callipepla californica</i>	Introduced and naturalised
Caspian tern	Taranui	<i>Hydroprogne caspia</i>	Nationally vulnerable
Chaffinch		<i>Fringilla coelebs</i>	Introduced and naturalised
Common pheasant		<i>Phasianus colchicus</i>	Introduced and naturalised
Eastern rosella		<i>Platycercus eximius</i>	Introduced and naturalised
Goldfinch		<i>Carduelis carduelis</i>	Introduced and naturalised
Greenfinch		<i>Carduelis chloris</i>	Introduced and naturalised
Grey warbler	Riroriro	<i>Gerygone igata</i>	Not threatened
House sparrow		<i>Passer domesticus</i>	Introduced and naturalised
Indian myna		<i>Acridotheres tristis</i>	Introduced and naturalised
Mallard		<i>Anas platyrhynchos</i>	Introduced and naturalised
Marsh crake	Koitareke	<i>Porzana pusilla affinis</i>	Declining
New Zealand dotterel	Tūturiwhatu	<i>Charadrius obscurus</i>	Recovering
New Zealand Pigeon	Kereru	<i>Hemiphaga novaeseelandiae</i>	Not threatened

North Island fantail		<i>Rhipidura fuliginosa placabilis</i>	Not threatened
North Island fernbird	Mātātā	<i>Bowdleria punctata vealeae</i>	Declining
North Island weka		<i>Gallirallus australis greyi</i>	Recovering
Paradise duck	Pūtangitangi	<i>Tadoma variegata</i>	Not threatened
Pied stilt	Poaka	<i>Himantopus himantopus leucocephalus</i>	Not threatened
Pūkeko	Pūkeko	<i>Porphyrio melanotus melanotus</i>	Not threatened
Red-billed gull	Tarāpunga	<i>Larus novaehollandiae scopulinus</i>	Declining
Royal spoonbill	Kōtuku ngutupapa	<i>Platalea regia</i>	Naturally uncommon
Scared kingfisher	Kōtare	<i>Todiramphys sanctus vagans</i>	Not threatened
Shining cuckoo	Pipiwaharoa	<i>Chrysococcyx lucidus lucidus</i>	Not threatened
Silvereye	Tauhō	<i>Zosterops lateralis lateralis</i>	Not threatened
Skylark		<i>Alauda arvensis</i>	Introduced and naturalised
Song thrush		<i>Turdus philomelos</i>	Introduced and naturalised
Spotless crane	Pūweto	<i>Porzana tabuensis tabuensis</i>	Declining
Spur-winged plover		<i>Vanellus miles novaehollandiae</i>	Not threatened
Starling		<i>Sturnus vulgaris</i>	Introduced and naturalised
Tui	Tūī	<i>Prothemadera novaeseelandiae novaeseelandiae</i>	Not threatened
Variable oystercatcher	Tōrea pango	<i>Haematopus unicolor</i>	Recovering
Welcome swallow	Warou	<i>Hirundo neoxena neoxena</i>	Not threatened
White-faced heron	Matuku	<i>Egretta novaehollandiae</i>	Not threatened
White-fronted tern	Tara	<i>Sterna striata</i>	Declining
Yellow hammer		<i>Emberiza citrinella</i>	Introduced and naturalised